



SEQUENCE LISTING

<110> SERVANT, GUY
OZECK, MARK
BRUST, PAUL
XU, HONG

<120> FUNCTIONAL COUPLING OF T1RS AND T2RS BY GI PROTEINS
AND CELL-BASED ASSAYS FOR THE IDENTIFICATION OF T1R
AND T2R MODULATORS

<130> 100337.54281US

<140> 10/770,127

<141> 2004-02-03

<150> 60/444,172

<151> 2003-02-03

<150> 60/457,318

<151> 2003-03-26

<160> 210

<170> PatentIn version 3.2

<210> 1

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<212> PRT

<213> Homo sapiens

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Ser Gln Asn Ala Thr Ile Gln Lys Glu Asp Thr Leu Ala Ile Gln Ile
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Phe Ser Phe Val Ala Glu Phe Ser Val Pro Leu Leu Ile Phe Leu Phe
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Ala Val Leu Leu Leu Ile Phe Ser Leu Gly Arg His Thr Arg Gln Met
195 200 205

Arg Asn Thr Val Ala Gly Ser Arg Val Pro Gly Arg Gly Ala Pro Ile
210 215 220

Ser Ala Leu Leu Ser Ile Leu Ser Phe Leu Ile Leu Tyr Phe Ser His
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Cys Met Ile Lys Val Phe Leu Ser Ser Leu Lys Phe His Ile Arg Arg
245 250 255

Phe Ile Phe Leu Phe Phe Ile Leu Val Ile Gly Ile Tyr Pro Ser Gly
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 Cys Asn Glu Leu Ile Lys His Arg Lys Leu Met Pro Ile Gln Ile Leu
 35 40 45
 Leu Met Cys Ile Gly Met Ser Arg Phe Gly Leu Gln Met Val Leu Met
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 Val Gln Ser Phe Phe Ser Val Phe Phe Pro Leu Leu Tyr Val Lys Ile
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 Ile Tyr Gly Ala Ala Met Met Phe Leu Trp Met Phe Phe Ser Ser Ile
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 Ser Leu Trp Phe Ala Thr Cys Leu Ser Val Phe Tyr Cys Leu Lys Ile
 100 105 110
 Ser Gly Phe Thr Gln Ser Cys Phe Leu Trp Leu Lys Phe Arg Ile Pro
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 Lys Leu Ile Pro Trp Leu Phe Trp Glu Ala Phe Trp Pro Leu Ala Leu
 130 135 140
 His Leu Cys Val Glu Val Asp Tyr Ala Lys Asn Val Glu Glu Asp Ala
 145 150 155 160
 Leu Arg Asn Thr Thr Leu Lys Lys Ser Lys Thr Lys Ile Lys Lys Ile
 165 170 175
 Ser Glu Val Leu Leu Val Asn Leu Ala Leu Ile Phe Pro Leu Ala Ile
 180 185 190
 Phe Val Met Cys Thr Ser Met Leu Leu Ile Ser Leu Tyr Lys His Thr
 195 200 205
 His Arg Met Gln His Gly Ser His Gly Phe Arg Asn Ala Asn Thr Glu
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Ala His Ile Asn Ala Leu Lys Thr Val Ile Thr Phe Phe Cys Phe Phe
 225 230 235 240
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35           40           45

Thr Thr Leu Ala Leu Leu Arg Ile Ile Leu Leu Cys Ile Ile Leu Thr
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Asp Ser Phe Leu Ile Glu Phe Ser Pro Asn Thr His Asp Ser Gly Ile
65           70           75           80

Ile Met Gln Ile Ile Asp Val Ser Trp Thr Phe Thr Asn His Leu Ser
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Val Met Val Trp Met Leu Leu Gly Ala Leu Leu Leu Ser Cys Gly Ser
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Thr Ala Ser Leu Ile Asn Glu Phe Lys Leu Tyr Ser Val Phe Arg Gly
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Ile Glu Ala Thr Arg Asn Val Thr Glu His Phe Arg Lys Lys Arg Ser
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Glu Tyr Tyr Leu Ile His Val Leu Gly Thr Leu Trp Tyr Leu Pro Pro
180          185          190

Leu Ile Val Ser Leu Ala Ser Tyr Ser Leu Leu Ile Phe Ser Leu Gly
195          200          205

Arg His Thr Arg Gln Met Leu Gln Asn Gly Thr Ser Ser Arg Asp Pro
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Thr Thr Glu Ala His Lys Arg Ala Ile Arg Ile Ile Leu Ser Phe Phe
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Phe Leu Phe Leu Leu Tyr Phe Leu Ala Phe Leu Ile Ala Ser Phe Gly
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Asn Phe Leu Pro Lys Thr Lys Met Ala Lys Met Ile Gly Glu Val Met
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Thr Met Phe Tyr Pro Ala Gly His Ser Phe Ile Leu Ile Leu Gly Asn
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Phe	Ser	Leu	Gly	Ile	Thr	Arg	Phe	Leu	Met	Leu	Gly	Leu	Phe	Leu	Val	50	55	60
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Trp	Phe	Val	Thr	Leu	Leu	Asn	Ile	Leu	Tyr	Cys	Val	Lys	Ile	Thr	Asn	100	105	110
Phe	Gln	His	Ser	Val	Phe	Leu	Leu	Leu	Lys	Arg	Asn	Ile	Ser	Pro	Lys	115	120	125
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Cys	Leu	Tyr	Ile	Thr	Leu	Ser	Gln	Ala	Ser	Pro	Phe	Pro	Glu	Leu	Val	145	150	155
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Val	Thr	Ser	Ala	Ser	Leu	Leu	Ile	His	Ser	Leu	Arg	Arg	His	Ile	Gln	195	200	205
Lys	Met	Gln	Lys	Asn	Ala	Thr	Gly	Phe	Trp	Asn	Pro	Gln	Thr	Glu	Ala	210	215	220
His	Val	Gly	Ala	Met	Lys	Leu	Met	Val	Tyr	Phe	Leu	Ile	Leu	Tyr	Ile	225	230	235
Pro	Tyr	Ser	Val	Ala	Thr	Leu	Val	Gln	Tyr	Leu	Pro	Phe	Tyr	Ala	Gly	245	250	255
Met	Asp	Met	Gly	Thr	Lys	Ser	Ile	Cys	Leu	Ile	Phe	Ala	Thr	Leu	Tyr	260	265	270
Ser	Pro	Gly	His	Ser	Val	Leu	Ile	Ile	Ile	Thr	His	Pro	Lys	Leu	Lys	275	280	285
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Leu Gly Leu Ala Gly Cys Arg Phe Leu Leu Gln Trp Leu Ile Ile Leu
50        55        60

Asp Leu Ser Leu Phe Pro Leu Phe Gln Ser Ser Arg Trp Leu Arg Tyr
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Leu Ser Ile Phe Trp Val Leu Val Ser Gln Ala Ser Leu Trp Phe Ala
85        90        95

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 Gly Leu Thr Phe Tyr His Pro Pro Gln Gly Asn Ser Ser Ile Arg Tyr
 145 150 155 160
 Pro Phe Glu Ser Trp Gln Tyr Leu Tyr Ala Phe Gln Leu Asn Ser Gly
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 Ser Tyr Leu Pro Leu Val Val Phe Leu Val Ser Ser Gly Met Leu Ile
 180 185 190
 Val Ser Leu Tyr Thr His His Lys Lys Met Lys Val His Ser Ala Gly
 195 200 205
 Arg Arg Asp Val Arg Ala Lys Ala His Ile Thr Ala Leu Lys Ser Leu
 210 215 220
 Gly Cys Phe Leu Leu Leu His Leu Val Tyr Ile Met Ala Ser Pro Phe
 225 230 235 240
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 245 250 255
 Trp Glu Thr Leu Met Ala Ala Tyr Pro Ser Leu His Ser Leu Ile Leu
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Arg Gly Trp Val Lys Lys Met Gly Val Pro Ile Asn Ser His Asp Ser
          35          40          45
Gly Lys Pro Leu Ser Pro Thr Gln Ala Asp His Val Gly His Lys Ser
          50          55          60
Val Ser Thr Phe Pro Glu Gln Trp Leu Ala Leu Leu Ser Cys Leu Arg
65          70          75          80
Val Leu Val Ser Gln Ala Asn Met Phe Ala Thr Phe Phe Ser Gly Phe
          85          90          95
Cys Cys Met Glu Ile Met Thr Phe Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa
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 Ser Val Pro Leu Val Phe Leu Arg His His Arg Lys Met Glu Asp His
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 Thr Ala Val Arg Arg Arg Leu Lys Pro Arg Xaa Xaa Xaa Xaa Xaa Xaa
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 210 215 220
 Ala Arg His Phe Ser Met Thr Phe Ser Pro Ser Asp Leu Thr Ile Leu
 225 230 235 240
 Ala Ile Ser Ala Thr Leu Met Ala Val Tyr Thr Ser Phe Pro Ser Ile
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 Thr Ser Leu Ala Ile Ser Arg Ile Cys Leu Leu Cys Val Ile Leu Leu
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 65 70 75 80
 Glu Met Arg Ile Ile Asp Phe Phe Trp Thr Leu Thr Asn His Leu Ser
 85 90 95
 Ile Trp Phe Ala Thr Cys Leu Ser Ile Tyr Tyr Phe Phe Lys Ile Gly
 100 105 110
 Asn Phe Phe His Pro Leu Phe Leu Trp Met Lys Trp Arg Ile Asp Arg
 115 120 125
 Val Ile Ser Trp Ile Leu Leu Gly Cys Val Val Leu Ser Val Phe Ile
 130 135 140
 Ser Leu Pro Ala Thr Glu Asn Leu Asn Ala Asp Phe Arg Phe Cys Val
 145 150 155 160
 Lys Ala Lys Arg Lys Thr Asn Leu Thr Trp Ser Cys Arg Val Asn Lys
 165 170 175
 Thr Gln His Ala Ser Thr Lys Leu Phe Leu Asn Leu Ala Thr Leu Leu
 180 185 190
 Pro Phe Cys Val Cys Leu Met Ser Phe Phe Leu Leu Ile Leu Ser Leu
 195 200 205
 Arg Arg His Ile Arg Arg Met Gln Leu Ser Ala Thr Gly Cys Arg Asp
 210 215 220

Pro Ser Thr Glu Ala His Val Arg Ala Leu Lys Ala Val Ile Ser Phe
 225 230 235 240
 Leu Leu Leu Phe Ile Ala Tyr Tyr Leu Ser Phe Leu Ile Ala Thr Ser
 245 250 255
 Ser Tyr Phe Met Pro Glu Thr Glu Leu Ala Val Ile Phe Gly Glu Ser
 260 265 270
 Ile Ala Leu Ile Tyr Pro Ser Ser His Ser Phe Ile Leu Ile Leu Gly
 275 280 285
 Asn Asn Lys Leu Arg His Ala Ser Leu Lys Val Ile Trp Lys Val Met
 290 295 300
 Ser Ile Leu Lys Gly Arg Lys Phe Gln Gln His Lys Gln Ile
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<210> 14

<211> 957

<212> DNA

<213> Homo sapiens

<400> 14

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gtaatactat tagattgttt tatattggtg ctatatccag atgtctatgc cactggtaaa	240
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aaggcaaaga ggaaaacaaa cttaacttgg agttgcagag taaataaaac tcaacatgct	540
tctaccaagt tatctctcaa cctggcaacg ctgctccctt tttgtgtgtg cctaattgtc	600
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gggtgcagag accccagcac agaagcccat gtgagagccc tgaaagctgt catttccttc	720
cttctcctct ttattgccta ctatttgtcc tttctcattg ccacctccag ctactttatg	780
ccagagacgg aattagctgt gatttttggg gagtccatag ctctaattcta cccctcaagt	840
cattcattta tctaataact gggaacaat aaattaagac atgcatctct aaaggtgatt	900
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<210> 15
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 15

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			20					25					30		
Ile	Asp	Trp	Ile	Lys	Lys	Lys	Lys	Ile	Ser	Thr	Val	Asp	Tyr	Ile	Leu
		35					40					45			
Thr	Asn	Leu	Val	Ile	Ala	Arg	Ile	Cys	Leu	Ile	Ser	Val	Met	Val	Val
	50					55					60				
Asn	Gly	Ile	Val	Ile	Val	Leu	Asn	Pro	Asp	Val	Tyr	Thr	Lys	Asn	Lys
65					70				75					80	
Gln	Gln	Ile	Val	Ile	Phe	Thr	Phe	Trp	Thr	Phe	Ala	Asn	Tyr	Leu	Asn
				85					90					95	
Met	Trp	Ile	Thr	Thr	Cys	Leu	Asn	Val	Phe	Tyr	Phe	Leu	Lys	Ile	Ala
			100					105					110		
Ser	Ser	Ser	His	Pro	Leu	Phe	Leu	Trp	Leu	Lys	Trp	Lys	Ile	Asp	Met
		115					120					125			
Val	Val	His	Trp	Ile	Leu	Leu	Gly	Cys	Phe	Ala	Ile	Ser	Leu	Leu	Val
	130					135					140				
Ser	Leu	Ile	Ala	Ala	Ile	Val	Leu	Ser	Cys	Asp	Tyr	Arg	Phe	His	Ala
145					150					155					160
Ile	Ala	Lys	His	Lys	Arg	Asn	Ile	Thr	Glu	Met	Phe	His	Val	Ser	Lys
				165					170					175	
Ile	Pro	Tyr	Phe	Glu	Pro	Leu	Thr	Leu	Phe	Asn	Leu	Phe	Ala	Ile	Val
			180					185					190		
Pro	Phe	Ile	Val	Ser	Leu	Ile	Ser	Phe	Phe	Leu	Leu	Val	Arg	Ser	Leu
	195						200					205			
Trp	Arg	His	Thr	Lys	Gln	Ile	Lys	Leu	Tyr	Ala	Thr	Gly	Ser	Arg	Asp
	210					215						220			
Pro	Ser	Thr	Glu	Val	His	Val	Arg	Ala	Ile	Lys	Thr	Met	Thr	Ser	Phe
225					230					235					240
Ile	Phe	Phe	Phe	Phe	Leu	Tyr	Tyr	Ile	Ser	Ser	Ile	Leu	Met	Thr	Phe
				245					250					255	
Ser	Tyr	Leu	Met	Thr	Lys	Tyr	Lys	Leu	Ala	Val	Glu	Phe	Gly	Glu	Ile
		260						265					270		

Ala Ala Ile Leu Tyr Pro Leu Gly His Ser Leu Ile Leu Ile Val Leu
 275 280 285

Asn Asn Lys Leu Arg Gln Thr Phe Val Arg Met Leu Thr Cys Arg Lys
 290 295 300

Ile Ala Cys Met Ile
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<210> 16
 <211> 930
 <212> DNA
 <213> Homo sapiens

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 atttccacag ttgactacat ccttaccaat ttagttatcg ccagaatttg tttgatcagt 180
 gtaatgggtg taaatggcat tgtaatagta ctgaaccag atgtttatac aaaaaataaa 240
 caacagatag tcattttttac cttctggaca tttgccaaact acttaaatat gtggattacc 300
 acctgcctta atgtcttcta ttttctgaag atagccagtt cctctcatcc actttttctc 360
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 tccttggttg tcagccttat agcagcaata gtactgagtt gtgattatag gtttcatgca 480
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 ggcagtagag accccagcac agaagttcat gtgagagcca ttaaaaactat gacttcattt 720
 atcttctttt ttttcttata ctatatttct tctattttga tgacctttag ctatcttatg 780
 acaaaaatata agttagctgt ggagtttggg gagattgcag caattctcta ccccttgggt 840
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 acatgtagaa aaattgcctg catgatatga 930

<210> 17
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 17
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 Ile Asp Trp Leu Lys Arg Arg Asp Ile Ser Leu Ile Asp Ile Ile Leu
 35 40 45
 Ile Ser Leu Ala Ile Ser Arg Ile Cys Leu Leu Cys Val Ile Ser Leu
 50 55 60
 Asp Gly Phe Phe Met Leu Leu Phe Pro Gly Thr Tyr Gly Asn Ser Val
 65 70 75 80
 Leu Val Ser Ile Val Asn Val Val Trp Thr Phe Ala Asn Asn Ser Ser
 85 90 95
 Leu Trp Phe Thr Ser Cys Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala
 100 105 110
 Asn Ile Ser His Pro Phe Phe Phe Trp Leu Lys Leu Lys Ile Asn Lys
 115 120 125
 Val Met Leu Ala Ile Leu Leu Gly Ser Phe Leu Ile Ser Leu Ile Ile
 130 135 140
 Ser Val Pro Lys Asn Asp Asp Met Trp Tyr His Leu Phe Lys Val Ser
 145 150 155 160
 His Glu Glu Asn Ile Thr Trp Lys Phe Lys Val Ser Lys Ile Pro Gly
 165 170 175
 Thr Phe Lys Gln Leu Thr Leu Asn Leu Gly Val Met Val Pro Phe Ile
 180 185 190
 Leu Cys Leu Ile Ser Phe Phe Leu Leu Leu Phe Ser Leu Val Arg His
 195 200 205
 Thr Lys Gln Ile Arg Leu His Ala Thr Gly Phe Arg Asp Pro Ser Thr
 210 215 220
 Glu Ala His Met Arg Ala Ile Lys Ala Val Ile Ile Phe Leu Leu Leu
 225 230 235 240
 Leu Ile Val Tyr Tyr Pro Val Phe Leu Val Met Thr Ser Ser Ala Leu
 245 250 255
 Ile Pro Gln Gly Lys Leu Val Leu Met Ile Gly Asp Ile Val Thr Val
 260 265 270
 Ile Phe Pro Ser Ser His Ser Phe Ile Leu Ile Met Gly Asn Ser Lys
 275 280 285
 Leu Arg Glu Ala Phe Leu Lys Met Leu Arg Phe Val Lys Cys Phe Leu
 290 295 300
 Arg Arg Arg Lys Pro Phe Val Pro
 305 310

<210> 18
 <211> 939
 <212> DNA
 <213> Homo sapiens

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 atttccttga ttgacatcat cctgatcagc ttggccatct ccagaatctg tctgctgtgt 180
 gtaatatcat tagatggctt ctttatgctg ctctttccag gtacatatgg caatagcgtg 240
 ctagtaagca ttgtgaatgt tgtctggaca ttgccaata attcaagtct ctggtttact 300
 tcttgccctca gtatcttcta tttactcaag atagccaata tatcgacccc atttttcttc 360
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 tctttaatta ttagtggtcc aaagaatgat gatatgtggt atcacctttt caaagtcagt 480
 catgaagaaa acattacttg gaaattcaaa ctgagtaaaa ttccaggtag tttcaaacag 540
 ttaaccctga acctgggggt gatgggtccc tttatccttt gcctgatctc atttttcttg 600
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 gaccccgata cagaggccca catgagggcc ataaaggcag tgatcatctt tctgctctc 720
 ctcatcgtgt actaccagat ctttcttggt atgacctcta gcgctctgat tcctcagggg 780
 aaattagtgt tgatgattgg tgacatagta actgtcattt tcccatcaag ccattcattc 840
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<210> 19
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 19
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 20 25 30
 Ile Asp Cys Ala Lys Asn Lys Leu Ser Thr Ile Gly Phe Ile Leu Thr
 35 40 45
 Gly Leu Ala Ile Ser Arg Ile Phe Leu Ile Trp Ile Ile Ile Thr Asp
 50 55 60

Gly Phe Ile Gln Ile Phe Ser Pro Asn Ile Tyr Ala Ser Gly Asn Leu
 65 70 75 80
 Ile Glu Tyr Ile Ser Tyr Phe Trp Val Ile Gly Asn Gln Ser Ser Met
 85 90 95
 Trp Phe Ala Thr Ser Leu Ser Ile Phe Tyr Phe Leu Lys Ile Ala Asn
 100 105 110
 Phe Ser Asn Tyr Ile Phe Leu Trp Leu Lys Ser Arg Thr Asn Met Val
 115 120 125
 Leu Pro Phe Met Ile Val Phe Leu Leu Ile Ser Ser Leu Leu Asn Phe
 130 135 140
 Ala Tyr Ile Ala Lys Ile Leu Asn Asp Tyr Lys Thr Lys Asn Asp Thr
 145 150 155 160
 Val Trp Asp Leu Asn Met Tyr Lys Ser Glu Tyr Phe Ile Lys Gln Ile
 165 170 175
 Leu Leu Asn Leu Gly Val Ile Phe Phe Phe Thr Leu Ser Leu Ile Thr
 180 185 190
 Cys Ile Phe Leu Ile Ile Ser Leu Trp Arg His Asn Arg Gln Met Gln
 195 200 205
 Ser Asn Val Thr Gly Leu Arg Asp Ser Asn Thr Glu Ala His Val Lys
 210 215 220
 Ala Met Lys Val Leu Ile Ser Phe Ile Ile Leu Phe Ile Leu Tyr Phe
 225 230 235 240
 Ile Gly Met Ala Ile Glu Ile Ser Cys Phe Thr Val Arg Glu Asn Lys
 245 250 255
 Leu Leu Leu Met Phe Gly Met Thr Thr Thr Ala Ile Tyr Pro Trp Gly
 260 265 270
 His Ser Phe Ile Leu Ile Leu Gly Asn Ser Lys Leu Lys Gln Ala Ser
 275 280 285
 Leu Arg Val Leu Gln Gln Leu Lys Cys Cys Glu Lys Arg Lys Asn Leu
 290 295 300
 Arg Val Thr
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<210> 20

<211> 924

<212> DNA

<213> Homo sapiens

<400> 20

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attgaatata ttagttactt ttgggtaatt ggtaatcaat caagtatgtg gtttgccacc 300
agcctcagca tcttctattt cctgaagata gcaaattttt ccaactacat atttctctgg 360
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tgagagacaca acaggcagat gcaatcgaat gtgacaggat tgagagactc caacacagaa 660
gctcatgtga aggcaatgaa agttttgata tctttcatca tcctctttat cttgtatttt 720
ataggcatgg ccatagaaat atcatgtttt actgtgagag aaaacaaact gctgcttatg 780
tttggaatga caaccacagc catctatccc tggggtcact catttatctt aattctagga 840
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aggaaaaatc tcagagtcac atag 924

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<210> 21
<211> 242
<212> PRT
<213> Homo sapiens

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<221> MOD_RES
<222> (58)..(89)
<223> Variable amino acid

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20          25          30

Ile Asp Trp Ile Arg Arg Trp Lys Leu Ser Leu Ile Asp Phe Ile Leu
35          40          45

Thr Cys Trp Ala Ile Ser Arg Ile Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa
50          55          60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65          70          75          80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn His Leu Cys Thr Phe Ala
85          90          95

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Thr Cys Leu Ala Val Phe Tyr Phe Leu Lys Ile Val Asn Phe Ser Tyr
 100 105 110
 Leu Phe Tyr Phe Trp Leu Lys Trp Arg Ile Asn Lys Val Ala Phe Ile
 115 120 125
 Leu Pro Leu Val Ser Ala Phe Ser Val Tyr Gln Leu Ser Phe Asp Val
 130 135 140
 His Phe Cys Leu Leu Val Ser Cys Pro Lys Lys Tyr Glu Arg His Met
 145 150 155 160
 Thr Gly Leu Leu Asn Val Ser Asn Asn Lys Asn Val Asn Asn Ile Ile
 165 170 175
 Ile Phe Phe Ile Gly Ser Leu Ser Ser Phe Ser Ile Ser Ser Ile Phe
 180 185 190
 Phe Leu Leu Leu Leu Leu Ser Ser Arg His Met Lys His Ile Arg Phe
 195 200 205
 Asn Phe Arg Asp Cys Arg Thr Pro Val Tyr Gly Pro Ile Ser Glu Pro
 210 215 220
 Arg Lys Arg Phe Ser Phe Phe Val Leu Leu Leu Tyr Lys Asn Leu Pro
 225 230 235 240

Phe Ser

<210> 22
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 22
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 Ile Arg Asn Lys Val Ser Leu Ile Asp Phe Ile Leu Asn Cys Leu Ala
 35 40 45
 Ile Ser Arg Ile Cys Phe Leu Ile Thr Ile Leu Ala Thr Ser Phe Asn
 50 55 60
 Ile Gly Tyr Glu Lys Met Pro Asp Ser Lys Asn Leu Ala Val Ser Phe
 65 70 75 80
 Asp Ile Leu Trp Thr Gly Ser Ser Tyr Phe Cys Leu Ser Cys Thr Thr
 85 90 95
 Cys Leu Ser Val Phe Tyr Phe Leu Lys Val Ala Asn Phe Ser Asn Pro
 100 105 110

Ile Phe Leu Trp Met Lys Trp Lys Ile His Lys Val Leu Leu Phe Ile
 115 120 125
 Val Leu Glu Ala Thr Ile Ser Phe Cys Thr Thr Ser Ile Leu Lys Glu
 130 135 140
 Ile Ile Ile Asn Ser Leu Ile Glu Arg Val Thr Ile Lys Gly Asn Leu
 145 150 155 160
 Thr Phe Asn Tyr Met Asp Thr Met His Asp Phe Thr Ser Leu Phe Leu
 165 170 175
 Leu Gln Met Met Phe Ile Leu Pro Phe Val Glu Thr Leu Ala Ser Ile
 180 185 190
 Leu Leu Leu Ile Leu Ser Leu Trp Ser His Thr Arg Gln Met Lys Leu
 195 200 205
 His Gly Ile Tyr Ser Arg Asp Pro Ser Thr Glu Ala His Val Lys Pro
 210 215 220
 Ile Lys Ala Ile Ile Ser Phe Leu Leu Leu Phe Ile Val His Tyr Phe
 225 230 235 240
 Ile Ser Ile Ile Leu Thr Leu Ala Cys Pro Leu Leu Asp Phe Val Ala
 245 250 255
 Ala Arg Thr Phe Ser Ser Val Leu Val Phe Phe His Pro Ser Gly His
 260 265 270
 Ser Phe Leu Leu Ile Leu Arg Asp Ser Lys Leu Lys Gln Ala Ser Leu
 275 280 285
 Cys Val Leu Lys Lys Met Lys Tyr Ala Lys Lys Asp Ile Ile Ser His
 290 295 300
 Phe Tyr Lys His Ala
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<210> 23

<211> 948

<212> DNA

<213> Homo sapiens

<400> 23

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 ataacaattt tagctacctc tttcaatata ggctatgaga aaatgcctga ttctaagaat 240
 cttgcagtaa gttttgacat tctctggaca ggatccagct atttctgcct gtcctgtacc 300
 acttgcctca gtgtcttcta tttcctcaag gtagccaact tctccaatcc cattttcctc 360

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tggatgaaat ggaaaattca caaggtgctt ctctttattg tactagaggc aacgatctct 420
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acaataaaag gcaacttgac atttaattat atggatacca tgcattgattt cacttctctg 540
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ttaatcctct ccttatggag ccacaccagg cagatgaagc tacatgggtat ttattccagg 660
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tttattgtgc attatttcat cagtatcata ctaacattgg cctgtcctct tctagacttc 780
gttgcggaag ggacttttag tagtgtgtg gtatttttcc atccatctgg ccattcattt 840
cttctaattt tacgggacag caaactgaag caagcttctc tctgtgtcct gaagaagatg 900
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<210> 24

<211> 303

<212> PRT

<213> Homo sapiens

<400> 24

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20           25           30

Ile Asp Trp Val Ser Lys Arg Glu Leu Ser Ser Val Asp Lys Leu Leu
35           40           45

Ile Ile Leu Ala Ile Ser Arg Ile Gly Leu Ile Trp Glu Ile Leu Val
50           55           60

Ser Trp Phe Leu Ala Leu His Tyr Leu Ala Ile Phe Val Ser Gly Thr
65           70           75           80

Gly Leu Arg Ile Met Ile Phe Ser Trp Ile Val Ser Asn His Phe Asn
85           90           95

Leu Trp Leu Ala Thr Ile Phe Ser Ile Phe Tyr Leu Leu Lys Ile Ala
100          105          110

Ser Phe Ser Ser Pro Ala Phe Leu Tyr Leu Lys Trp Arg Val Asn Lys
115          120          125

Val Ile Leu Met Ile Leu Leu Gly Thr Leu Val Phe Leu Phe Leu Asn
130          135          140

Leu Ile Gln Ile Asn Met His Ile Lys Asp Trp Leu Asp Arg Tyr Glu
145          150          155          160

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Arg	Asn	Thr	Thr	Trp	Asn	Phe	Ser	Met	Ser	Asp	Phe	Glu	Thr	Phe	Ser
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Val	Ser	Val	Lys	Phe	Thr	Met	Thr	Met	Phe	Ser	Leu	Thr	Pro	Phe	Thr
			180					185					190		
Val	Ala	Phe	Ile	Ser	Phe	Leu	Leu	Leu	Ile	Phe	Ser	Leu	Gln	Lys	His
		195					200					205			
Leu	Gln	Lys	Met	Gln	Leu	Asn	Tyr	Lys	Gly	His	Arg	Asp	Pro	Arg	Thr
	210					215					220				
Lys	Val	His	Thr	Asn	Ala	Leu	Lys	Ile	Val	Ile	Ser	Phe	Leu	Leu	Phe
225					230					235					240
Tyr	Ala	Ser	Phe	Phe	Leu	Cys	Val	Leu	Ile	Ser	Trp	Ile	Ser	Glu	Leu
				245					250					255	
Tyr	Gln	Asn	Thr	Val	Ile	Tyr	Met	Leu	Cys	Glu	Thr	Ile	Gly	Val	Phe
			260					265					270		
Ser	Pro	Ser	Ser	His	Ser	Phe	Leu	Leu	Ile	Leu	Gly	Asn	Ala	Lys	Leu
		275					280					285			
Arg	Gln	Ala	Phe	Leu	Leu	Val	Ala	Ala	Lys	Val	Trp	Ala	Lys	Arg	
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<210> 25

<211> 912

<212> DNA

<213> Homo sapiens

<400> 25

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gaaatattag taagttaggtt tttagctctg cattatctag ccatatttgt gtctggaaca	240
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acaatcttca gcatctttta tttgctcaaa atagcgagtt tctctagccc tgcttttctc	360
tatttgaagt ggagagtaaa caaagtgatt ctgatgatac tgctaggaac cttgggtcttc	420
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agaaacacaa cttggaattt cagtatgagt gactttgaaa cattttcagt gtcgggtcaaa	540
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ttaattttct ccctgcagaa acatctccag aaaatgcaac tcaattacaa aggacacaga	660
gaccccgagg ccaaggtcca tacaaatgcc ttgaaaattg tgatctcatt ccttttatct	720

tatgctagtt tctttctatg tgttctcata tcatggattt ctgagctgta tcagaacaca 780
 gtgatctaca tgctttgtga gacgattgga gtcttctctc cttcaagcca ctcctttctt 840
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<210> 26
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 26
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 Ile Asp Trp Val Lys Gly Arg Lys Ile Ser Ser Val Asp Arg Ile Leu
 35 40 45
 Thr Ala Leu Ala Ile Ser Arg Ile Ser Leu Val Trp Leu Ile Phe Gly
 50 55 60
 Ser Trp Cys Val Ser Val Phe Phe Pro Ala Leu Phe Ala Thr Glu Lys
 65 70 75 80
 Met Phe Arg Met Leu Thr Asn Ile Trp Thr Val Ile Asn His Phe Ser
 85 90 95
 Val Trp Leu Ala Thr Gly Leu Gly Thr Phe Tyr Phe Leu Lys Ile Ala
 100 105 110
 Asn Phe Ser Asn Ser Ile Phe Leu Tyr Leu Lys Trp Arg Val Lys Lys
 115 120 125
 Val Val Leu Val Leu Leu Leu Val Thr Ser Val Phe Leu Phe Leu Asn
 130 135 140
 Ile Ala Leu Ile Asn Ile His Ile Asn Ala Ser Ile Asn Gly Tyr Arg
 145 150 155 160
 Arg Asn Lys Thr Cys Ser Ser Asp Ser Ser Asn Phe Thr Arg Phe Ser
 165 170 175
 Ser Leu Ile Val Leu Thr Ser Thr Val Phe Ile Phe Ile Pro Phe Thr
 180 185 190
 Leu Ser Leu Ala Met Phe Leu Leu Leu Ile Phe Ser Met Trp Lys His
 195 200 205
 Arg Lys Lys Met Gln His Thr Val Lys Ile Ser Gly Asp Ala Ser Thr
 210 215 220

Lys Ala His Arg Gly Val Lys Ser Val Ile Thr Phe Phe Leu Leu Tyr
 225 230 235 240
 Ala Ile Phe Ser Leu Ser Phe Phe Ile Ser Val Trp Thr Ser Glu Arg
 245 250 255
 Leu Glu Glu Asn Leu Ile Ile Leu Ser Gln Val Met Gly Met Ala Tyr
 260 265 270
 Pro Ser Cys His Ser Cys Val Leu Ile Leu Gly Asn Lys Lys Leu Arg
 275 280 285
 Gln Ala Ser Leu Ser Val Leu Leu Trp Leu Arg Tyr Met Phe Lys Asp
 290 295 300
 Gly Glu Pro Ser Gly His Lys Glu Phe Arg Glu Ser Ser
 305 310 315

<210> 27

<211> 954

<212> DNA

<213> Homo sapiens

<400> 27

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atctcttcgg ttgatcggat cctcactgct ttggcaatct ctggaattag cctgggttgg	180
ttaatattcg gaagctggtg tgtgtctgtg tttttccag ctttatttgc cactgaaaaa	240
atgttcagaa tgcttactaa tatctggaca gtgatcaatc atttttagtgt ctggttagct	300
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tacctaaagt ggagggttaa aaagggtggt ttggtgctgc ttcttgtgac ttcgggtcttc	420
ttgtttttta atattgcact gataaacatc catataaatg ccagtatcaa tggatacaga	480
agaaacaaga cttgcagttc tgattcaagt aactttacac gattttccag tcttattgta	540
ttaaccagca ctgtgttcat tttcataccc tttactttgt ccctggcaat gtttcttctc	600
ctcatcttct ccatgtggaa acatcgcaag aagatgcagc aactgtcaa aatatccgga	660
gacgccagca ccaaagccca cagaggagt aaaagtgtga tcactttctt cctactctat	720
gccattttct ctctgtcttt tttcatatca gtttggacct ctgaaagggt ggaggaaaat	780
ctaattattc tttcccaggt gatgggaatg gcttatcctt catgtcactc atgtgttctg	840
attcttggaa acaagaagct gagacaggcc tctctgtcag tgctactgtg gctgaggtac	900
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<210> 28
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 28

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			20					25					30		
Ile	Glu	Trp	Val	Lys	Arg	Gln	Lys	Ile	Ser	Phe	Ala	Asp	Gln	Ile	Leu
		35					40					45			
Thr	Ala	Leu	Ala	Val	Ser	Arg	Val	Gly	Leu	Leu	Trp	Val	Ile	Leu	Leu
	50					55					60				
His	Trp	Tyr	Ala	Thr	Val	Leu	Asn	Pro	Gly	Ser	Tyr	Ser	Leu	Gly	Val
65					70					75				80	
Arg	Ile	Thr	Thr	Ile	Asn	Ala	Trp	Ala	Val	Thr	Asn	His	Phe	Ser	Ile
				85					90					95	
Trp	Val	Ala	Thr	Ser	Leu	Ser	Ile	Phe	Tyr	Phe	Leu	Lys	Ile	Ala	Asn
			100					105					110		
Phe	Ser	Asn	Phe	Ile	Phe	Leu	His	Leu	Lys	Arg	Arg	Ile	Lys	Ser	Val
		115					120					125			
Ile	Pro	Val	Ile	Leu	Leu	Gly	Ser	Leu	Leu	Phe	Leu	Val	Cys	His	Leu
	130					135					140				
Val	Val	Val	Asn	Met	Asp	Glu	Ser	Met	Trp	Thr	Lys	Glu	Tyr	Glu	Gly
145					150					155					160
Asn	Val	Ser	Trp	Glu	Ile	Lys	Leu	Ser	Asp	Pro	Thr	His	Leu	Ser	Asp
				165					170					175	
Met	Thr	Val	Thr	Thr	Leu	Ala	Asn	Leu	Ile	Pro	Phe	Thr	Leu	Ser	Leu
			180					185					190		
Leu	Ser	Phe	Leu	Leu	Leu	Ile	Cys	Ser	Leu	Cys	Lys	His	Leu	Lys	Lys
		195					200					205			
Met	Gln	Phe	His	Gly	Lys	Gly	Ser	Pro	Asp	Ser	Asn	Thr	Lys	Val	His
	210					215					220				
Ile	Lys	Ala	Leu	Gln	Thr	Val	Thr	Ser	Phe	Leu	Leu	Leu	Phe	Ala	Val
225					230					235				240	
Tyr	Phe	Leu	Ser	Leu	Ile	Thr	Ser	Ile	Trp	Asn	Phe	Arg	Arg	Arg	Leu
				245					250					255	
Asn	Glu	Pro	Val	Leu	Met	Leu	Ser	Gln	Thr	Thr	Ala	Ile	Ile	Tyr	Pro
			260					265					270		

Ser Phe His Ser Phe Ile Leu Ile Trp Gly Ser Lys Lys Leu Lys Gln
 275 280 285

Thr Phe Leu Leu Ile Leu Cys Gln Ile Lys Cys
 290 295

<210> 29

<211> 903

<212> DNA

<213> Homo sapiens

<400> 29

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atctcctttg ctgaccaa atctcactgct ctggcagtct ccagagttgg tttgctctgg      180
gtaatattat tacattggta tgcaactggt ttgaatccag gttcatatag tttaggagta      240
agaattacta ctattaatgc ctgggctgta accaaccatt tcagcatctg ggttgctact      300
agcctcagca tattttatct cctcaagatt gccaatctct ccaactttat ttttcttcac      360
ttaaaaagga gaattaagag tgtcattcca gtgatactat tgggggtcttt gttatctttg      420
gtttgtcatc ttgttgttgt aaacatggat gagagtatgt ggacaaaaga atatgaagga      480
aacgtgagtt gggagatcaa attgagtgat ccgacgcacc tttcagatat gactgtaacc      540
acgcttgcaa acttaatacc ctttactctg tcctgtttat cttttctgct cttaatctgt      600
tctttgtgta aacatctcaa gaagatgcag ttccatggca aaggatctcc agattccaac      660
accaaggtcc acataaaagc ttgcaaacg gtgacctcct tcctcttggt atttgctggt      720
tactttctgt ccctaatac atcgatttgg aatttttagga ggaggctgta gaacgaacct      780
gtcctcatgc tcagccaaac tactgcaatt atataccctt catttcattc attcatccta      840
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<210> 30

<211> 291

<212> PRT

<213> Homo sapiens

<400> 30

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          20           25           30
  
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Gly Arg Glu Trp Leu Gln Val Arg Arg Leu Met Pro Val Asp Met Ile
 35 40 45
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 50 55 60
 Leu Asn Asn Phe Cys Ser Tyr Phe Asn Leu Asn Tyr Val Leu Cys Asn
 65 70 75 80
 Leu Thr Ile Thr Trp Glu Phe Phe Asn Ile Leu Thr Phe Trp Leu Asn
 85 90 95
 Ser Leu Leu Thr Val Phe Tyr Cys Ile Lys Val Ser Ser Phe Thr His
 100 105 110
 His Ile Phe Leu Trp Leu Arg Trp Arg Ile Leu Arg Leu Phe Pro Trp
 115 120 125
 Ile Leu Leu Gly Ser Leu Met Ile Thr Cys Val Thr Ile Ile Pro Ser
 130 135 140
 Ala Ile Gly Asn Tyr Ile Gln Ile Gln Leu Leu Thr Met Glu His Leu
 145 150 155 160
 Pro Arg Asn Ser Thr Val Thr Asp Lys Leu Glu Asn Phe His Gln Tyr
 165 170 175
 Gln Phe Gln Ala His Thr Val Ala Leu Val Ile Pro Phe Ile Leu Phe
 180 185 190
 Leu Ala Ser Thr Ile Phe Leu Met Ala Ser Leu Thr Lys Gln Ile Gln
 195 200 205
 His His Ser Thr Gly His Cys Asn Pro Ser Met Lys Ala Arg Phe Thr
 210 215 220
 Ala Leu Arg Ser Leu Ala Val Leu Phe Ile Val Phe Thr Ser Tyr Phe
 225 230 235 240
 Leu Thr Ile Leu Ile Thr Ile Ile Gly Thr Leu Phe Asp Lys Arg Cys
 245 250 255
 Trp Leu Trp Val Trp Glu Ala Phe Val Tyr Ala Phe Ile Leu Met His
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 Gly Lys Cys
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<210> 31

<211> 876

<212> DNA

<213> Homo sapiens

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<400> 31
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aggctgatgc ctgtggacat gattctcatc agcctgggca tctctcgctt ctgtctacag      180
tgggcatcaa tgctgaacaa tttttgctcc tattttaatt tgaattatgt actttgcaac      240
ttaacaatca cctgggaatt ttttaatatc cttacattct ggttaaacag cttgcttacc      300
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agaattttga ggttggtttc ctggatatta ctgggttctc tgatgattac ttgtgtaaca      420
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ccaagaaaca gcaactgaac tgacaaactt gaaaattttc atcagtatca gttccaggct      540
catacagttg cattgggtat tcctttcatc ctgttcctgg cctccaccat ctttctcatg      600
gcatcactga ccaagcagat acaacatcat agcactggc actgcaatcc aagcatgaaa      660
gcgcgcttca ctgccctgag gtcccttgcc gtcttattta ttgtgtttac ctcttacttt      720
ctaaccatac tcatcaccat tataggtact ctatttgata agagatggtg gttatgggtc      780
tggaagctt ttgtctatgc tttcatctta atgcattcca cttcactgat gctgagcagc      840
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<210> 32
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<213> Homo sapiens

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<223> Variable amino acid

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<220>
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<223> Variable amino acid

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<220>
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<223> Variable amino acid

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20           25           30

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Val	Asn	Asp	Trp	Val	Lys	Thr	Gln	Lys	Ile	Ser	Ser	Thr	Asp	Gln	Ile	35	40	45	
Val	Thr	Ala	Leu	Ala	Phe	Ser	Arg	Ile	Gly	Leu	Leu	Xaa	Thr	Leu	Ile	50	55	60	
Ile	Leu	Leu	His	Trp	Tyr	Ala	Thr	Val	Phe	Asn	Ser	Ala	Leu	Tyr	Ser	65	70	75	80
Leu	Glu	Val	Arg	Ile	Val	Pro'	Ser	Asn	Val	Ser	Ala	Ile	Ile	Asn	His	85	90	95	
Phe	Ser	Ile	Trp	Leu	Ala	Thr	Ser	Leu	Ser	Ile	Phe	Tyr	Leu	Phe	Lys	100	105	110	
Ile	Ala	Asn	Phe	Ser	Asn	Phe	Ile	Phe	Leu	His	Leu	Lys	Lys	Arg	Ile	115	120	125	
Lys	Ser	Val	Leu	Leu	Val	Ile	Leu	Leu	Gly	Ser	Leu	Val	Phe	Leu	Ile	130	135	140	
Cys	Asn	Leu	Ala	Val	Val	Thr	Met	Asp	Asp	Ser	Val	Trp	Thr	Lys	Glu	145	150	155	160
Phe	Glu	Gly	Asn	Val	Thr	Trp	Lys	Ile	Glu	Leu	Arg	Asn	Ala	Ile	His	165	170	175	
Leu	Ser	Asn	Met	Thr	Ile	Thr	Asn	His	Ala	Ser	Lys	Leu	His	Thr	Val	180	185	190	
His	Ser	Asp	Ser	Asn	Ile	Phe	Ser	Ala	Val	Ser	Leu	Phe	Ser	Xaa	Thr	195	200	205	
Met	Leu	Ala	Asn	Phe	Thr	Leu	Phe	Ile	Leu	Thr	Leu	Ile	Ser	Phe	Leu	210	215	220	
Leu	Leu	Val	Cys	Ser	Pro	Cys	Lys	His	Leu	Lys	Met	Met	Gln	Leu	His	225	230	235	240
Gly	Lys	Gly	Ser	Gln	Asp	Leu	Ser	Thr	Lys	Val	His	Ile	Lys	Pro	Leu	245	250	255	
Gln	Thr	Val	Ile	Ser	Phe	Arg	Met	Leu	Phe	Ala	Ile	Tyr	Phe	Leu	Cys	260	265	270	
Ile	Ile	Thr	Ser	Thr	Trp	Asn	Pro	Arg	Thr	Gln	Gln	Ser	Asn	Leu	Val	275	280	285	
Phe	Leu	Leu	Tyr	Gln	Thr	Leu	Ala	Ile	Met	Tyr	Pro	Ser	Phe	His	Ser	290	295	300	
Phe	Ile	Leu	Ile	Met	Arg	Ser	Arg	Lys	Leu	Lys	Gln	Thr	Ser	Leu	Ser	305	310	315	320
Val	Leu	Cys	Gln	Val	Thr	Cys	Trp	Val	Lys							325	330		

<210> 33
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 33

Met	Phe	Val	Gly	Ile	Asn	Ile	Phe	Phe	Leu	Val	Val	Ala	Thr	Arg	Gly	1	5	10	15
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Ile	Glu	Trp	Ala	Lys	Ser	Trp	Lys	Val	Ser	Ser	Ala	Asp	Phe	Ile	Leu	35	40	45	
Thr	Ser	Leu	Ala	Ile	Val	Arg	Ile	Ile	Arg	Leu	Tyr	Leu	Ile	Leu	Phe	50	55	60	
Asp	Ser	Phe	Ile	Met	Val	Leu	Ser	Pro	His	Leu	Tyr	Thr	Ile	Arg	Lys	65	70	75	80
Leu	Val	Lys	Leu	Phe	Thr	Ile	Leu	Trp	Ala	Leu	Ile	Asn	Gln	Leu	Ser	85	90	95	
Ile	Phe	Ala	Thr	Cys	Leu	Ser	Ile	Phe	Tyr	Leu	Leu	Lys	Ile	Ala	Asn	100	105	110	
Phe	Ser	His	Ser	Leu	Phe	Leu	Trp	Leu	Lys	Trp	Arg	Met	Asn	Gly	Met	115	120	125	
Ile	Val	Met	Leu	Leu	Ile	Leu	Ser	Leu	Phe	Leu	Leu	Ile	Phe	Asp	Ser	130	135	140	
Leu	Val	Leu	Glu	Ile	Phe	Ile	Asp	Ile	Ser	Leu	Asn	Ile	Ile	Asp	Lys	145	150	155	160
Ser	Asn	Leu	Thr	Leu	Tyr	Leu	Asp	Glu	Ser	Lys	Thr	Leu	Tyr	Asp	Lys	165	170	175	
Leu	Ser	Ile	Leu	Lys	Thr	Leu	Leu	Ser	Leu	Thr	Tyr	Val	Ile	Pro	Phe	180	185	190	
Leu	Leu	Thr	Leu	Thr	Ser	Leu	Leu	Leu	Phe	Ile	Ser	Leu	Val	Arg	195	200	205		
His	Thr	Lys	Asn	Leu	Gln	Leu	Asn	Ser	Leu	Gly	Ser	Arg	Asp	Ser	Ser	210	215	220	
Thr	Glu	Ala	His	Lys	Arg	Ala	Met	Lys	Met	Val	Ile	Ala	Phe	Leu	Leu	225	230	235	240
Leu	Phe	Ile	Ile	Asn	Phe	Ile	Ser	Thr	Leu	Ile	Gly	Asp	Trp	Ile	Phe	245	250	255	
Leu	Glu	Val	Glu	Asn	Tyr	Gln	Val	Met	Met	Phe	Ile	Met	Met	Ile	Leu	260	265	270	

Leu Ala Phe Pro Ser Gly His Ser Phe Ile Ile Ile Leu Gly Asn Asn
 275 280 285

Lys Leu Arg Gln Ser Ser Leu Arg Leu Leu Trp His Leu Lys Phe Ser
 290 295 300

Leu Lys Lys Ala Lys Pro Leu Thr Ser
 305 310

<210> 34
 <211> 945
 <212> DNA
 <213> Homo sapiens

<400> 34
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 ttaatactat ttgattcatt tataatggta ttgtccctc atctatatac catccgtaaa 240
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 aaaagtaatc tgactttata tttagatgaa agtaaaactc tctatgataa actctctatt 540
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 gagaattatc aggtcatgat gtttattatg atgattttac ttgcctttcc ctgaggccac 840
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 <211> 121
 <212> PRT
 <213> Homo sapiens

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 Leu His Ser Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His Ile Lys
 35 40 45
 Ala Leu Gln Thr Val Thr Ser Phe Leu Met Leu Phe Ala Ile Tyr Phe
 50 55 60
 Leu Cys Ile Ile Thr Ser Thr Trp Asn Leu Arg Thr Gln Gln Ser Lys
 65 70 75 80
 Leu Val Leu Leu Leu Cys Gln Thr Val Ala Ile Met Tyr Pro Ser Phe
 85 90 95
 His Ser Phe Ile Leu Ile Met Gly Ser Arg Lys Leu Lys Gln Thr Phe
 100 105 110
 Leu Ser Val Leu Trp Gln Met Thr Cys
 115 120

<210> 36
 <211> 466
 <212> DNA
 <213> Homo sapiens

<400> 36
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 atcccagcac caaggtccat ataaaagctt tgcaaactgt gacctccttc ctcatgttat 180
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 aacttgctact cctgctttgc caaactgttg caatcatgta tccttcattc cactcattca 300
 tcctgattat gggaagtagg aagctaaaac agacctttct ttcagttttg tggcagatga 360
 catgctgagt gaaagaagag aaaccctcaa ctccatagat tcacaagggg agcatcgtgg 420
 gtcttctagc agaaaacaaa ctgatggtgt ctggaacatt ttatat 466

<210> 37
 <211> 129
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> Variable amino acid

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 Asn Val Trp Thr Glu Glu Cys Glu Gly Asn Val Thr Trp Lys Ile Lys
 35 40 45
 Leu Arg Asn Ala Met His Leu Ser Asn Leu Thr Val Ala Met Leu Ala
 50 55 60
 Asn Leu Ile Pro Phe Thr Leu Thr Val Ile Ser Phe Leu Leu Leu Ile
 65 70 75 80
 Tyr Ser Leu Cys Lys His Leu Lys Lys Met Gln Leu His Gly Lys Gly
 85 90 95
 Ser Gln Asp Pro Ser Thr Lys Ile His Ile Lys Ala Leu Gln Thr Val
 100 105 110
 Thr Ser Phe Leu Val Leu Leu Ala Ile Tyr Phe Leu Cys Leu Ile Ile
 115 120 125

Ser

<210> 38
 <211> 397
 <212> DNA
 <213> Homo sapiens

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 <221> modified_base
 <222> (12)..(12)
 <223> n is a, c, g, or t

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 gtgaaggaaa cgtaacttgg aagatcaaac tgaggaatgc aatgcacctt tccaacttga 180
 ctgtagccat gctagcaaac ttgataccat tcaactctgac cgtgatatct tttctgctgt 240
 taatctactc tctgtgtaaa catctgaaga agatgcagct ccatggcaaa ggatctcaag 300
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 ttgccattta ctttctgtgt ctaatcatat ccttttg 397

<210> 39
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 39

Met Pro Pro Gly Ile Gly Asn Thr Phe Leu Ile Val Met Met Gly Glu
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 Phe Ile Ile Met Leu Gly Asn Gly Phe Ile Val Leu Val Asn Cys Ile
 20 25 30
 Asp Trp Gly Val Lys Ser Tyr Thr Thr Ala Ser Ser Pro Ala Trp Leu
 35 40 45
 Ser Pro Gln Ser Val Asn Phe Gly Tyr Tyr Leu Ile His Leu Gln His
 50 55 60
 Tyr Gly His Ile Tyr Met Pro Ser Ile Asn Asn Leu Phe Ile Phe Phe
 65 70 75 80
 Gly His Pro Ile Thr Leu Pro Gly Leu Leu Pro Cys Phe Leu Leu Leu
 85 90 95
 Asn Thr Tyr Phe Ser His Pro Cys Phe Ile Trp Leu Arg Trp Arg Ile
 100 105 110
 Ser Arg Thr Leu Leu Glu Leu Pro Leu Gly Ser Leu Leu Leu Leu Phe
 115 120 125
 Phe Asn Leu Ala Leu Thr Gly Gly Leu Ser Asp Leu Trp Ile Asn Ile
 130 135 140
 Tyr Thr Ile Tyr Glu Arg Asn Ser Thr Trp Ser Leu Asp Val Ser Lys
 145 150 155 160
 Ile Leu Tyr Cys Ser Leu Trp Ile Leu Val Ser Leu Ile Tyr Leu Ile
 165 170 175
 Ser Phe Leu Leu Ser Leu Ile Ser Leu Leu Leu Leu Ile Leu Ser Leu
 180 185 190
 Met Arg His Ile Arg Asn Leu Gln Leu Asn Thr Met Gly Pro Arg Asp
 195 200 205
 Leu Arg Met Lys Ala His Lys Arg Ala Met Lys Met Lys Met Lys Met
 210 215 220
 Met Val Ser Phe Leu Leu Phe Phe Leu Val His Phe Ser Ser Leu Leu
 225 230 235 240
 Pro Thr Gly Trp Ile Phe Leu Ile Gln Gln Lys Gln Ala Asn Phe Phe
 245 250 255
 Val Leu Leu Thr Ser Ile Ile Phe Pro Ser Ser His Ser Phe Val Leu
 260 265 270
 Ile Leu Glu Asn Cys Lys Leu Arg Gln Thr Ala Val Gly Pro Leu Trp
 275 280 285
 His Leu Lys Cys His Leu Lys Arg Val Lys Leu
 290 295

<210> 40
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 1 5 10 15
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 20 25 30
 Ser Glu Xaa Ile Lys Asn Xaa Lys Val Phe Ser Ala Asp Phe Ile Leu
 35 40 45
 Thr Cys Leu Ala Ile Ser His Asn Gly Gln Leu Leu Val Ile Leu Phe
 50 55 60
 Asp Ser Phe Leu Val Gly Leu Ala Ser His Leu Tyr Thr Thr Tyr Arg
 65 70 75 80
 Leu Xaa Lys Asn Cys Ile Met Leu Trp Thr
 85 90

<210> 41
 <211> 656
 <212> DNA
 <213> Homo sapiens

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>
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 <223> n is a, c, g, or t

<400> 41
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acttnccttaa gtatatgaga ctctatccaa cagcagaagg ttctgatcaa gactggaagt 180
gcaatanaag caatgaagat aagtatcaga tatgaatgct cttctgcaat ggtctgattg 240
tnacattatt aatgatacan agtattaaaa acttggattt tnttgtctct ggagatggcc 300
accgaatcgg acacaaatct tctgattctg gcaatagcag aattcatcat cagcatgctg 360
gggaatgtgt tcattggact ggtaaactgc tctgaangga tcaagaacca naaggtcttc 420
tcagctgact tcatcctcac ctgcttggct atctctcaca atggacaact gttggtgata 480
ctgtttgatt catttctagt gggacttgct tcacatctat ataccacata tagactanga 540
aaaaactgta ttatgctttg gacatgacta atcacttgac aactgcttc gcacgtgcta 600
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<210> 42
<211> 70
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<213> Homo sapiens

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<223> Variable amino acid

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<220>
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<223> Variable amino acid

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<220>
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<400> 42
Val Ala Phe Val Leu Gly Asn Val Ala Asn Gly Phe Ile Ala Leu Val
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Asn Val Ile Asp Xaa Val Asn Thr Arg Lys Ile Ser Ser Ala Glu Gln
          20           25           30

Ile Leu Thr Ala Leu Val Val Ser Arg Ile Gly Xaa Thr Leu Xaa His
35           40           45

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Ser Ile Pro Asp Ala Thr Arg Cys Ser Ala Leu Tyr Arg Xaa Glu Val
 50 55 60

Arg Ile Val Ala Ser Asn
 65 70

<210> 43
 <211> 589
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 <223> n is a, c, g, or t

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 <222> (42)..(42)
 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 gagaatgtat atgaagagga gtgaatttga gtctgtttga gaataatgac cttttctatt 120
 tctataaaga cagttttgaa ttcatctatt agcatatgct ggtgcttgcc tgttgacact 180

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agtcactgaa tttaaaggca gaaaatgtta ttgcacattt agtaatcaag tgttcacga      240
agttaacatc tggatgttaa aggactcaga acaagtgtta ctaagcctgc atttttttat      300
ctgttcaaac atgatgtgtt ntctgctcat catttcatca attctggtag agttgcattt      360
gttcttggaa atgtngccaa tggttcata gctctagtaa atgtcattga ctgngttaac      420
acacgaaaga tctcctcagc tgagcaaatt ctactgctc tggtggtctc cagaattggt      480
nntactctgn gtcatagtat tccttgagat gcaactagat gttaatctgc tctatatagg      540
ntagaagtaa gaattgttgc ttctaatgcc tgagctcgta cgaaccatt      589

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<210> 44

<211> 314

<212> PRT

<213> Homo sapiens

<400> 44

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Met Ala Thr Glu Leu Asp Lys Ile Phe Leu Ile Leu Ala Ile Ala Glu
1           5           10          15

Phe Ile Ile Ser Met Leu Gly Asn Val Phe Ile Gly Leu Val Asn Cys
          20          25          30

Ser Glu Gly Ile Lys Asn Gln Lys Val Phe Ser Ala Asp Phe Ile Leu
          35          40          45

Thr Cys Leu Ala Ile Ser Thr Ile Gly Gln Leu Leu Val Ile Leu Phe
          50          55          60

Asp Ser Phe Leu Val Gly Leu Ala Ser His Leu Tyr Thr Thr Tyr Arg
65          70          75          80

Leu Gly Lys Thr Val Ile Met Leu Trp His Met Thr Asn His Leu Thr
          85          90          95

Thr Trp Leu Ala Thr Cys Leu Ser Ile Phe Tyr Phe Phe Lys Ile Ala
          100         105         110

His Phe Pro His Ser Leu Phe Leu Trp Leu Arg Trp Arg Met Asn Gly
          115         120         125

Met Ile Val Met Leu Leu Ile Leu Ser Leu Phe Leu Leu Ile Phe Asp
          130         135         140

Ser Leu Val Leu Glu Ile Phe Ile Asp Ile Ser Leu Asn Ile Ile Asp
145         150         155         160

Lys Ser Asn Leu Thr Leu Tyr Leu Asp Glu Ser Lys Thr Leu Tyr Asp
          165         170         175

Lys Leu Ser Ile Leu Lys Thr Leu Leu Ser Leu Thr Ser Phe Ile Pro
          180         185         190

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Phe Ser Leu Phe Leu Thr Ser Leu Leu Phe Leu Phe Leu Ser Leu Val
 195 200 205
 Arg His Thr Arg Asn Leu Lys Leu Ser Ser Leu Gly Ser Arg Asp Ser
 210 215 220
 Ser Thr Glu Ala His Arg Arg Ala Met Lys Met Val Met Ser Phe Leu
 225 230 235 240
 Phe Leu Phe Ile Val His Phe Phe Ser Leu Gln Val Ala Asn Gly Ile
 245 250 255
 Phe Phe Met Leu Trp Asn Asn Lys Tyr Ile Lys Phe Val Met Leu Ala
 260 265 270
 Leu Asn Ala Phe Pro Ser Cys His Ser Phe Ile Leu Ile Leu Gly Asn
 275 280 285
 Ser Lys Leu Arg Gln Thr Ala Val Arg Leu Leu Trp His Leu Arg Asn
 290 295 300
 Tyr Thr Lys Thr Pro Asn Ala Leu Pro Leu
 305 310

<210> 45

<211> 945

<212> DNA

<213> Homo sapiens

<400> 45

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gtctttctcag ctgacttcat cctcacctgc ttggctatct ccacaattgg acaactgttg	180
gtgatactgt ttgattcatt tctagtggga cttgcttcac atttatatac cacatataga	240
ctaggaaaaa ctgttattat gctttggcac atgactaatc acttgacaac ctggcttgcc	300
acctgcctaa gcattttcta tttctttaag atagcccact tccccactc ccttttctc	360
tggctgaggt ggaggatgaa cggaatgatt gttatgcttc ttatattgtc tttgttctta	420
ctgatttttg acagtttagt gctagaaata tttattgata tctcactcaa tataatagat	480
aaaagtaatc tgactttata tttagatgaa agtaaaactc tctatgataa actctctatt	540
ttaaaaactc ttctcagctt aaccagtttt atcccccttt ctctgttctt gacctccttg	600
ctttttttat ttctgtcctt ggtgagacat actagaaatt tgaagctcag ttccttgggc	660
tctagagact ccagcacaga ggcccatagg agggccatga aaatggtgat gtctttcctt	720
ttctctttca tagttcattt tttttcctta caagtggcca atgggatatt ttttatgttg	780
tggaacaaca agtacataaa gtttgtcatg ttagccttaa atgcctttcc ctcgtgccac	840

tcattttattc tcattctctggg aaacagcaag ctgcgacaga cagctgtgag gctactgtgg 900

catcttagga actatacaaaa aacaccaaatt gctttacctt tgtag 945

<210> 46

<211> 72

<212> PRT

<213> Homo sapiens

<400> 46

Leu Ser Pro Phe Arg Met Leu Phe Ala Ile Tyr Phe Leu Cys Ile Ile
1 5 10 15

Thr Ser Thr Trp Asn Pro Arg Thr Gln Gln Ser Asn Leu Val Phe Leu
20 25 30

Leu Tyr Gln Thr Leu Ala Ile Met Tyr Pro Ser Phe His Ser Phe Ile
35 40 45

Leu Ile Met Arg Ser Arg Lys Leu Lys Gln Thr Ser Leu Ser Val Leu
50 55 60

Cys Gln Val Thr Cys Trp Val Lys
65 70

<210> 47

<211> 263

<212> PRT

<213> Homo sapiens

<400> 47

Met Pro Pro Gly Ile Gly Asn Thr Phe Leu Ile Val Met Met Gly Glu
1 5 10 15

Phe Ile Ile Met Leu Gly Asn Gly Phe Ile Val Leu Val Asn Cys Ile
20 25 30

Asp Val Arg Ser Gln Met Ile Leu Leu Asp Asn Cys Ile Leu Thr Ser
35 40 45

Leu Ala Ile Ser Thr Ile Ser Gln Leu Trp Ile Ile Leu Leu Asp Ser
50 55 60

Phe Val Thr Ala Leu Trp Pro His Leu Tyr Ala Phe Asn Lys Leu Ile
65 70 75 80

Lys Phe Ile His Ile Phe Trp Ala Leu Thr Asn His Leu Val Thr Trp
85 90 95

Leu Ala Cys Cys Leu Ser Val Phe Tyr Phe Phe Lys Ile Ala Tyr Phe
100 105 110

Ser His Pro Cys Phe Ile Trp Leu Arg Trp Arg Ile Ser Arg Thr Leu
115 120 125

Leu Glu Leu Pro Leu Gly Ser Leu Leu Leu Leu Phe Phe Asn Leu Ala
 130 135 140
 Leu Thr Gly Gly Leu Ser Asp Leu Trp Ile Asn Ile Tyr Thr Met Tyr
 145 150 155 160
 Glu Arg Asn Ser Thr Trp Ser Leu Asp Val Ser Lys Ile Leu Tyr Cys
 165 170 175
 Ser Leu Trp Ile Leu Val Ser Leu Ile Tyr Leu Ile Ser Phe Leu Leu
 180 185 190
 Ser Leu Ile Ser Leu Leu Leu Leu Ile Leu Ser Leu Met Arg His Ile
 195 200 205
 Arg Asn Leu Gln Leu Asn Thr Met Gly Pro Arg Asp Leu Arg Met Lys
 210 215 220
 Ala His Lys Arg Ala Met Lys Met Lys Met Lys Met Met Val Ser Phe
 225 230 235 240
 Leu Leu Phe Phe Leu Val His Phe Ser Ser Leu Leu Pro Thr Gly Trp
 245 250 255
 Ile Phe Leu Ile Gln Gln Lys
 260

<210> 48
 <211> 258
 <212> PRT
 <213> Homo sapiens

<400> 48
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 Phe Ile Leu Ser Ser Leu Ala Ile Cys Arg Thr Leu Leu Leu Gly Cys
 20 25 30
 Cys Val Ala Ile Arg Cys Thr Tyr Asn Asp Tyr Pro Asn Ile Asp Ala
 35 40 45
 Val Asn His Asn Leu Ile Lys Ile Ile Thr Ile Phe Asp Ile Leu Arg
 50 55 60
 Leu Val Ser Lys Leu Gly Ile Trp Phe Ala Ser Tyr Leu Ser Ile Phe
 65 70 75 80
 Tyr Leu Leu Lys Val Ala Leu Phe His His Ala Ile Phe Leu Trp Leu
 85 90 95
 Lys Trp Arg Ile Ser Arg Ala Val Phe Thr Phe Leu Met Ile Phe Leu
 100 105 110
 Phe Phe Tyr Ile Ser Ile Ile Ser Met Ile Lys Ile Lys Leu Phe Leu
 115 120 125

Asp Gln Cys Tyr Lys Ile Glu Lys Leu Leu Leu Glu Gly Arg Cys Glu
 130 135 140
 Ser Pro Pro Ser Cys Pro Asp Ala His Pro Gly Val Val Tyr Ser Leu
 145 150 155 160
 Tyr His Phe Ser Tyr Leu Met Phe Leu Val Cys Tyr Leu Pro Lys Gly
 165 170 175
 Lys His Cys Thr Ala Val Val Ile Gly Asp Trp Leu Gln Arg Pro Arg
 180 185 190
 Thr Glu Ala Tyr Val Arg Ala Met Asn Ile Met Ile Ala Phe Phe Phe
 195 200 205
 His Leu Leu Tyr Ser Leu Gly Thr Ser Leu Ser Ser Val Ser Tyr Phe
 210 215 220
 Leu Cys Lys Arg Lys Ile Val Ala Leu Gly Ala Tyr Leu Ser Tyr Pro
 225 230 235 240
 Leu Ser His Ser Phe Ile Leu Ile Met Glu Asn Asn Lys Val Arg Lys
 245 250 255

Ala Leu

<210> 49
 <211> 35
 <212> PRT
 <213> Homo sapiens

<400> 49
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 Phe Val Leu Gly Asn Val Ala Asn Gly Phe Ile Ala Leu Ile Asn Val
 20 25 30

Asn Asp Trp
 35

<210> 50
 <211> 36
 <212> PRT
 <213> Homo sapiens

<400> 50
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 Ser Leu Leu Gly Ile Ala Ala Asn Gly Phe Ile Val Leu Val Leu Gly
 20 25 30

Lys Glu Trp Leu
 35

<210> 51
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 51
 Met Ile Thr Phe Leu Pro Ile Ile Phe Ser Ile Leu Val Val Val Thr
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 Phe Val Leu Gly Asn Phe Ser Asn Gly Phe Ile Ala Leu Val Asn Ser
 20 25 30
 Ile Glu Trp Val Lys Thr Arg Lys Ile Ser Ser Ala Asp Gln Ile Leu
 35 40 45
 Thr Ala Leu Val Val Ser Arg Val Gly Leu Leu Trp Val Ile Leu Leu
 50 55 60
 His Trp Tyr Ala Asn Val Phe Asn Ser Ala Leu Tyr Ser Ser Glu Val
 65 70 75 80
 Gly Ala Val Ala Ser Asn Ile Ser Ala Ile Ile Asn His Phe Ser Ile
 85 90 95
 Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
 100 105 110
 Phe Ser Asn Leu Ile Phe Leu His Leu Lys Lys Arg Ile Arg Ser Val
 115 120 125
 Val Leu Val Ile Leu Leu Gly Pro Leu Val Phe Leu Ile Cys Asn Leu
 130 135 140
 Ala Val Ile Thr Met Asp Asp Ser Val Trp Thr Lys Glu Tyr Glu Gly
 145 150 155 160
 Asn Val Thr Trp Lys Ile Lys Leu Arg Asn Ala Ile His Leu Ser Asn
 165 170 175
 Met Thr Val Ser Thr Leu Ala Asn Leu Ile Pro Phe Ile Leu Thr Leu
 180 185 190
 Ile Cys Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
 195 200 205
 Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
 210 215 220
 Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Leu Leu Cys Ala Ile
 225 230 235 240
 Tyr Phe Leu Ser Met Ile Ile Ser Val Cys Asn Phe Gly Arg Leu Glu
 245 250 255
 Lys Gln Pro Val Phe Met Phe Cys Gln Ala Ile Ile Phe Ser Tyr Pro
 260 265 270

Ser Thr His Pro Phe Ile Leu Ile Leu Gly Asn Lys Lys Leu Lys Gln
 275 280 285

Ile Phe Leu Ser Val Leu Arg His Val Arg Tyr Trp Val Lys Asp Arg
 290 295 300

Ser Leu Arg Leu His Arg Phe Thr Arg Gly Ala Leu Cys Val Phe
 305 310 315

<210> 52
 <211> 960
 <212> DNA
 <213> Homo sapiens

<400> 52
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 atctcctcag ctgaccaaat cctcactgct ctgggtggtct ccagagttgg ttactctgg 180
 gtcataattat tacattggta tgcaaagtgt tttaattcag ctttatatag ttcagaagta 240
 ggagctgttg cttctaatat ctcagcaata atcaaccatt tcagcatctg gcttgctact 300
 agcctcagca tattttattt gctcaagatt gccaatctct ccaaccttat tttctctcac 360
 ttaaagaaga gaattaggag tgttggtctg gtgatactgt tgggtccctt ggtatttttg 420
 atttgtaatc ttgctgtgat aaccatggat gacagtgtgt ggacaaaaga atatgaagga 480
 aatgtgactt ggaagatcaa attgaggaat gcaatacacc tttcaaatat gactgtaagc 540
 acactagcaa acctcatacc cttcattctg accctaatat gttttctgct gttaatctgt 600
 tctctgtgta aacatctcaa gaagatgcag ctccatggca aaggatctca agatcccagc 660
 accaaggtcc acataaaagc tttgcaaact gtgacctcct ttcttctggt atgtgccatt 720
 tactttctgt ccatgatcat atcagtttgt aattttggga ggctggaaaa gcaacctgtc 780
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 ttgggaaaca agaagctaaa gcagatTTTT ctttcagttt tgcggcatgt gaggtactgg 900
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<210> 53
 <211> 299
 <212> PRT
 <213> Homo sapiens

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<222> (184)..(184)

<223> Variable amino acid

<400> 53

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20          25          30

Ile Glu Arg Val Lys Arg Gln Lys Ile Ser Phe Ala Asp Gln Ile Leu
35          40          45

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Leu Leu
50          55          60

Asn Trp Tyr Ser Thr Val Phe Asn Pro Ala Phe Tyr Ser Val Glu Val
65          70          75          80

Arg Thr Thr Ala Tyr Asn Val Trp Ala Val Thr Gly His Phe Ser Asn
85          90          95

Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
100         105         110

Phe Ser Asn Leu Ile Phe Leu His Leu Lys Arg Arg Val Lys Ser Val
115         120         125

Ile Leu Val Met Leu Leu Gly Pro Leu Leu Phe Leu Ala Cys Gln Leu
130         135         140

Phe Val Ile Asn Met Lys Glu Ile Val Arg Thr Lys Glu Phe Glu Gly
145         150         155         160

Asn Met Thr Trp Lys Ile Lys Leu Lys Ser Ala Met Tyr Phe Ser Xaa
165         170         175

Met Thr Val Thr Ile Gly Ala Xaa Leu Val Pro Phe Thr Leu Ser Leu
180         185         190

Ile Ser Phe Leu Met Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
195         200         205

Met Gln Leu His Gly Glu Gly Ser Gln Asp Leu Ser Thr Lys Val His
210         215         220

Ile Lys Ala Leu Gln Thr Leu Ile Ser Phe Leu Leu Leu Cys Ala Ile
225         230         235         240

Phe Phe Leu Phe Leu Ile Val Ser Val Trp Ser Pro Arg Arg Leu Arg
245         250         255

Asn Asp Pro Val Val Met Val Ser Lys Ala Val Gly Asn Ile Tyr Leu
260         265         270

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Ala Phe Asp Ser Phe Ile Leu Ile Trp Arg Thr Lys Lys Leu Lys His
 275 280 285

Thr Phe Leu Leu Ile Leu Cys Gln Ile Arg Cys
 290 295

<210> 54
 <211> 900
 <212> DNA
 <213> Homo sapiens

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 atctcttttg ctgaccagat tctcactgct ctggcggctc ccagagttgg ttgctctgg 180
 gtattattat taaattggta ttcaactgtg tttaatccag ctttttatag tgtagaagta 240
 agaactactg cttataatgt ctgggcagta accggccatt tcagcaactg gcttgctact 300
 agcctcagca tatttttattt gctcaagatt gccaatctct ccaaccttat ttttcttcac 360
 ttaaagagga gagttaagag tgtcattctg gtgatgctgt tggggccttt actatttttg 420
 gcttgctaac tttttgtgat aaacatgaaa gagattgtac ggacaaaaga atttgaagga 480
 aacatgactt ggaagatcaa attgaagagt gcaatgtact tttcanatat gactgtaacc 540
 attggagcan acttagtacc ctttactctg tccctgatat cttttctgat gctaattctgt 600
 tctctgtgta aacatctcaa gaagatgcag ctccatggag aaggatcgca agatctcagc 660
 accaagggtcc acataaaagc ttgcaaact ctgatctcct tcctcttggt atgtgccatt 720
 ttctttctat tcctaactgt ttcggtttgg agtcctagga ggctgcggaa tgacccggtt 780
 gtcatgggta gcaaggctgt tggaaacata tatcttgcac tcgactcatt catcctaatt 840
 tggagaacca agaagctaaa acacaccttt cttttgattt tgtgtcagat taggtgctga 900

<210> 55
 <211> 20
 <212> PRT
 <213> Homo sapiens

<400> 55

His Ser Phe Met Leu Thr Met Gly Ser Arg Lys Pro Lys Gln Thr Phe
 1 5 10 15

Leu Ser Ala Leu
 20

<210> 56

<211> 309

<212> PRT

<213> Homo sapiens

<400> 56

Met Val Tyr Phe Leu Pro Ile Ile Phe Ser Ile Leu Val Val Phe Ala
 1 5 10 15

Phe Val Leu Gly Asn Phe Ser Asn Gly Phe Ile Ala Leu Val Asn Val
 20 25 30

Ile Asp Trp Val Lys Arg Gln Lys Ile Ser Ser Ala Asp Gln Ile Leu
 35 40 45

Thr Ala Leu Val Val Ser Arg Val Gly Leu Leu Trp Val Ile Leu Leu
 50 55 60

His Trp Tyr Ala Asn Val Phe Asn Ser Ala Leu Tyr Ser Leu Glu Val
 65 70 75 80

Arg Ile Val Ala Ser Asn Ile Ser Ala Val Ile Asn His Phe Ser Ile
 85 90 95

Trp Leu Ala Ala Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
 100 105 110

Phe Ser Asn Leu Ile Phe Leu His Leu Lys Lys Arg Ile Lys Ser Val
 115 120 125

Val Leu Val Ile Leu Leu Gly Pro Leu Val Phe Leu Ile Cys Asn Leu
 130 135 140

Ala Val Ile Thr Met Asp Glu Arg Val Trp Thr Lys Glu Tyr Glu Gly
 145 150 155 160

Asn Val Thr Trp Lys Ile Lys Leu Arg Asn Ala Ile His Leu Ser Ser
 165 170 175

Leu Thr Val Thr Thr Leu Ala Asn Leu Ile Pro Phe Thr Leu Ser Leu
 180 185 190

Ile Cys Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
 195 200 205

Met Gln Leu His Ser Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
 210 215 220

Ile Lys Ala Leu Gln Thr Val Ile Ser Phe Leu Met Leu Cys Ala Ile
 225 230 235 240
 Tyr Phe Leu Ser Ile Met Ile Ser Val Met Asn Leu Arg Ser Leu Glu
 245 250 255
 Asn Lys Pro Val Phe Met Phe Cys Lys Ala Ile Arg Phe Ser Tyr Pro
 260 265 270
 Ser Ile His Pro Phe Ile Leu Ile Trp Gly Asn Lys Lys Leu Lys Gln
 275 280 285
 Thr Phe Leu Ser Val Phe Trp Gln Val Arg Tyr Trp Val Lys Gly Glu
 290 295 300
 Lys Pro Ser Ser Pro
 305

<210> 57

<211> 930

<212> DNA

<213> Homo sapiens

<400> 57

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atctcctcag ctgaccaaatt tctcactgct ctggtggtct ccagagttgg tttactctgg	180
gtcatattat tacattggta tgcaaatgtg tttaattcag ctttatatag tttagaagta	240
agaattgttg cttctaatat ctgagcagta atcaaccatt tcagcatctg gcttgctgct	300
agcctcagca tatttttattt gctcaagatt gccaatctt ccaaccttat ttttctccac	360
ctaaagaaga gaattaagag tggtgttctg gtgatactgt tggggccctt ggtatttctg	420
atgtgtaatc ttgctgtgat aacctggat gagagagtgt ggacaaaaga atatgaagga	480
aatgtgactt ggaagatcaa attgaggaat gcaatacacc tttcaagctt gactgtaact	540
actctagcaa acctcatacc ctttactctg agcctaatat gttttctgct gttaatctgt	600
tctctttgta aacatctcaa gaagatgcag ctccatagca aaggatctca agatcccagc	660
accaaggtcc acataaaagc ttgcaaact gtgatctcct tctcatgtt atgtgccatt	720
tactttctgt ccataatgat atcagtttgg aatcttagga gtctggaaaa caaacctgtc	780
ttcatgttct gcaaagctat tagattcagc tatccttcaa tccaccatt catcctgatt	840
tgggggaaaca agaagctaaa gcagactttt ctttcagttt tttggcaagt gaggtactgg	900
gtgaaaggag agaagccttc atctccatag	930

<210> 58
 <211> 100
 <212> PRT
 <213> Homo sapiens

<220>
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 <222> (5)..(5)
 <223> Variable amino acid

<220>
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 <222> (34)..(34)
 <223> Variable amino acid

<220>
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 <222> (71)..(71)
 <223> Variable amino acid

<220>
 <221> MOD_RES
 <222> (85)..(85)
 <223> Variable amino acid

<400> 58
 Gly Ser Ser Arg Xaa Lys Pro Pro Arg Ile Pro His Lys Lys Leu Cys
 1 5 10 15
 Lys Leu Gly Pro Ser Phe Pro His Asn Asn Leu Pro Ile Tyr Phe Leu
 20 25 30
 Cys Xaa Asn His Ile Val Leu Glu Phe Leu Lys Met Arg Pro Lys Lys
 35 40 45
 Lys Cys Ser Leu Met Leu Cys Gln Ala Phe Gly Ile Ile Tyr Pro Ser
 50 55 60
 Phe His Ser Phe Ile Leu Xaa Trp Gly Asn Lys Thr Leu Lys Gln Thr
 65 70 75 80
 Phe Leu Ser Val Xaa Trp Gln Val Thr Cys Trp Ala Lys Gly Gln Asn
 85 90 95
 Gln Ser Thr Pro
 100

<210> 59
 <211> 128
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (62)..(62)
 <223> Variable amino acid

<220>
 <221> MOD_RES
 <222> (72)..(72)
 <223> Variable amino acid

<400> 59

Asn	Ala	Ile	Arg	Pro	Ser	Lys	Leu	Trp	Thr	Val	Thr	Glu	Ala	Asp	Lys
1				5				10						15	
Thr	Ser	Gln	Pro	Gly	Thr	Ser	Ala	Asn	Lys	Ile	Phe	Ser	Ala	Gly	Asn
			20					25					30		
Leu	Ile	Ser	His	Val	Asn	Met	Ser	Arg	Arg	Met	Gln	Leu	His	Gly	Lys
		35					40					45			
Gly	Ser	Gln	His	Leu	Ser	Thr	Arg	Val	His	Ile	Lys	Ala	Xaa	Gln	Thr
	50					55					60				
Val	Ile	Ser	Phe	Leu	Met	Leu	Xaa	Ala	Ile	Tyr	Phe	Leu	Cys	Leu	Ile
65					70					75				80	
Thr	Ser	Thr	Trp	Asn	Pro	Arg	Thr	Gln	Gln	Ser	Lys	Leu	Val	Phe	Leu
				85					90					95	
Leu	Tyr	Gln	Thr	Leu	Gly	Phe	Met	Tyr	Leu	Leu	Phe	His	Ser	Phe	Ile
		100						105					110		
Leu	Thr	Met	Gly	Ser	Arg	Lys	Pro	Lys	Gln	Thr	Phe	Leu	Ser	Ala	Leu
		115					120					125			

<210> 60
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 60

Met	Ile	Cys	Phe	Leu	Leu	Ile	Ile	Leu	Ser	Ile	Leu	Val	Val	Phe	Ala
1				5				10						15	
Phe	Val	Leu	Gly	Asn	Phe	Ser	Asn	Gly	Phe	Ile	Ala	Leu	Val	Asn	Val
			20					25					30		
Ile	Asp	Trp	Val	Lys	Arg	Gln	Lys	Ile	Ser	Ser	Ala	Asp	Gln	Ile	Leu
		35					40					45			
Thr	Ala	Leu	Val	Val	Ser	Arg	Val	Gly	Leu	Leu	Trp	Val	Ile	Leu	Leu
	50					55					60				
His	Trp	Tyr	Ser	Asn	Val	Leu	Asn	Ser	Ala	Leu	Tyr	Ser	Ser	Glu	Val
65					70					75				80	
Ile	Ile	Phe	Ile	Ser	Asn	Ala	Trp	Ala	Ile	Ile	Asn	His	Phe	Ser	Ile
				85				90					95		
Trp	Leu	Ala	Thr	Ser	Leu	Ser	Ile	Phe	Tyr	Leu	Leu	Lys	Ile	Val	Asn
		100						105					110		

Phe Ser Arg Leu Ile Phe His His Leu Lys Arg Lys Ala Lys Ser Val
 115 120 125
 Val Leu Val Ile Val Leu Gly Pro Leu Val Phe Leu Val Cys His Leu
 130 135 140
 Val Met Lys His Thr Tyr Ile Asn Val Trp Thr Lys Glu Tyr Glu Gly
 145 150 155 160
 Asn Val Thr Trp Lys Ile Lys Leu Arg Asn Ala Ile His Leu Ser Asn
 165 170 175
 Leu Thr Val Ser Thr Leu Ala Asn Leu Ile Pro Phe Thr Leu Thr Leu
 180 185 190
 Ile Ser Phe Leu Leu Leu Ile Tyr Ser Leu Cys Lys His Leu Lys Lys
 195 200 205
 Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
 210 215 220
 Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Leu Leu Cys Ala Ile
 225 230 235 240
 Tyr Phe Leu Ser Met Ile Ile Ser Val Cys Asn Phe Gly Arg Leu Glu
 245 250 255
 Lys Gln Pro Val Phe Met Phe Cys Gln Ala Ile Ile Phe Ser Tyr Pro
 260 265 270
 Ser Thr His Pro Phe Ile Leu Ile Leu Gly Asn Lys Lys Leu Lys Gln
 275 280 285
 Ile Phe Leu Ser Val Phe Trp Gln Met Arg Tyr Trp Val Lys Gly Glu
 290 295 300
 Lys Pro Ser Ser Pro
 305

<210> 61

<211> 930

<212> DNA

<213> Homo sapiens

<400> 61

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atgatatggt ttctgctcat cattttatca attctggtag tgtttgcatt tgttcttgga      60
aatttttcca atggcttcat agctctagta aatgtcattg actggggtcaa gagacaaaag      120
atctcctcag ctgaccaaatt cctcactgct ctggtggtct ccagagttgg tttactctgg      180
gtaatattat tacattggta ttcaaagtgt ttgaattcag ctttatatag ttcagaagta      240
ataaattttta tttctaattgc ctgggcaata atcaaccatt tcagcatctg gcttgctact      300
agcctcagca tattttattt gctcaagatc gtcaatttct ccagacttat ttttcatcac      360

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ttaaaaagga aggctaagag tgtagttctg gtgatatgtg tgggtccctt ggtatTTTTg 420
gtttgtcacc ttgtgatgaa acacacgtat ataaatgtgt ggacaaaaga atatgaagga 480
aatgtgactt ggaagatcaa actgaggaat gcaatacacc tttcaaactt gactgtaagc 540
aactagcaa acttgatacc cttcactctg accctgatat cttttctgct gttaatctac 600
tctctgtgta aacatctcaa gaagatgcag ctccatggca aaggatctca agatcccagc 660
accaaggtcc acataaaagc ttgcaaaact gtgacctcct ttcttctggt atgtgccatt 720
tactttctgt ccatgatcat atcagtttgt aattttggga ggctggaaaa gcaacctgtc 780
ttcatgttct gccaaagtat tatattcagc tacccttcaa cccaccatt catcctgatt 840
ttgggaaaca agaagctaaa gcagattttt ctttcagttt tttggcaaat gaggtactgg 900
gtgaaaggag agaagccttc atctccatag 930

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<210> 62

<211> 306

<212> PRT

<213> Homo sapiens

<400> 62

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Met Ile Thr Phe Leu Pro Ile Ile Phe Ser Ile Leu Ile Val Val Thr
1           5           10           15

Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
20           25           30

Ile Glu Trp Val Lys Arg Gln Lys Ile Ser Ser Ala Asp Gln Ile Ser
35           40           45

His Cys Ser Gly Gly Val Gln Asn Trp Phe Thr Leu Gly His Ile Ile
50           55           60

Thr Leu Val Cys Asn Cys Val Phe Gly Phe Ile Ile Arg Ser Lys Asn
65           70           75           80

Phe Trp Phe Cys Leu Ser Asn Asn Gln Ala Phe Gln His Val Gly Val
85           90           95

Thr Ser Leu Ser Ile Phe His Leu Leu Lys Thr Ala Asn Phe Ser Asn
100          105          110

Leu Ile Phe Leu His Leu Lys Lys Arg Ile Lys Ser Val Gly Leu Val
115          120          125

Ile Leu Leu Gly Pro Leu Leu Phe Phe Ile Cys Asn Leu Phe Val Ile
130          135          140

Asn Met Asp Glu Ser Val Trp Thr Lys Glu Tyr Glu Gly Asn Val Thr
145          150          155          160

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Trp	Lys	Ile	Lys	Leu	Arg	Ser	Ala	Met	Tyr	His	Ser	Asn	Met	Thr	Leu	
				165					170					175		
Thr	Met	Leu	Ala	Asn	Phe	Val	Pro	Phe	Thr	Leu	Thr	Leu	Ile	Ser	Phe	
				180					185					190		
Leu	Leu	Leu	Ile	Cys	Ser	Leu	Cys	Lys	His	Leu	Lys	Lys	Met	Gln	Leu	
				195					200					205		
His	Gly	Lys	Gly	Ser	Gln	Asp	Pro	Ser	Thr	Lys	Val	His	Ile	Lys	Ala	
				210					215					220		
Leu	Gln	Thr	Val	Thr	Ser	Phe	Leu	Leu	Leu	Cys	Ala	Ile	Tyr	Phe	Leu	
				225					230					235		
Ser	Met	Ile	Ile	Ser	Val	Cys	Asn	Leu	Gly	Arg	Leu	Glu	Lys	Gln	Pro	
				245					250					255		
Val	Phe	Met	Phe	Cys	Glu	Ala	Ile	Ile	Phe	Ser	Tyr	Pro	Ser	Thr	His	
				260					265					270		
Pro	Phe	Ile	Leu	Ile	Leu	Gly	Asn	Lys	Lys	Leu	Lys	Gln	Ile	Phe	Leu	
				275					280					285		
Ser	Val	Leu	Arg	His	Val	Arg	Tyr	Trp	Val	Lys	Gly	Glu	Lys	Pro	Ser	
				290					295					300		
Ser	Ser															
		305														

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<210> 63
<211> 930
<212> DNA
<213> Homo sapiens
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<400> 63							
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aattttgcta	atggcttcat	agctctagta	aattccattg	agtgggttaa	gagacaaaag		120
atctcatcag	ctgaccaa	ttctcactgc	tctgggtggtg	tccagaattg	gtttactctg		180
ggtcataatta	ttacattggt	atgcaactgt	gtttaatttg	gcttcatata	gattagaagt		240
aagaatTTTT	ggttctaata	tctcagcaat	aaccaagcat	ttcagcatgt	gggtgttact		300
agcctcagca	tatttcattt	gctcaagact	gccaatttct	ccaaccttat	ttttctccac		360
ctaaagaaga	ggattaagag	tggttggttg	gtgatactat	tggggccttt	gctatTTTTc		420
atttgtaatc	TTTTTgtgat	aaacatggat	gagagtgtat	ggacaaaaga	atatgaagga		480
aacgtgactt	ggaagatcaa	attgaggagt	gcaatgtacc	attcaaatat	gactctaacc		540
atgctagcaa	actttgtacc	cttcactctg	accctgatat	cttttctgct	gttaatctgt		600
tctctgtgta	aacatctcaa	gaagatgcag	ctccatggca	aaggatctca	agatcccagc		660

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accaaggtcc acataaaagc tttgcaaact gtgacctcct ttctttctgtt atgtgccatt 720
tactttctgt ccatgatcat atcagtttgt aatttgggga ggctggaaaa gcaacctgtc 780
ttcatgttct gcgaagctat tatattcagc tatkcttcaa cccacccatt catcctgatt 840
ttgggaaaca agaagctaaa gcagatTTTT ctttcagttt tgcggcatgt gaggtactgg 900
gtgaaaggag agaagccttc atcttcatag 930

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<210> 64
<211> 144
<212> PRT
<213> Homo sapiens

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<400> 64
Met Leu Thr Leu Thr Arg Ile Arg Thr Val Ser Tyr Glu Val Arg Ser
1          5          10          15

Thr Phe Leu Phe Ile Ser Val Leu Glu Phe Ala Val Gly Phe Leu Thr
          20          25          30

Asn Ala Phe Val Phe Leu Val Asn Phe Trp Asp Val Val Lys Arg Gln
          35          40          45

Pro Leu Ser Asn Ser Asp Cys Val Leu Leu Cys Leu Ser Ile Ser Arg
          50          55          60

Leu Phe Leu His Gly Leu Leu Phe Leu Ser Ala Ile Gln Leu Thr His
65          70          75          80

Phe Gln Lys Leu Ser Glu Pro Leu Asn His Ser Tyr Gln Ala Ile Ile
          85          90          95

Met Leu Trp Met Ile Ala Asn Gln Ala Asn Leu Trp Leu Ala Ala Cys
          100          105          110

Leu Ser Leu Leu Tyr Cys Ser Lys Leu Ile Arg Phe Ser His Thr Phe
          115          120          125

Leu Ile Cys Leu Ala Ser Trp Ser Pro Gly Arg Ser Pro Val Pro Ser
          130          135          140

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<210> 65
<211> 140
<212> PRT
<213> Homo sapiens

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<400> 65
Leu Arg Asn Ala Gly Leu Asn Asp Ser Asn Ala Lys Leu Val Arg Asn
1          5          10          15

Asn Asp Leu Leu Leu Ile Asn Leu Ile Leu Leu Leu Pro Leu Ser Val
          20          25          30

```


Phe	Val	Met	Cys	Thr	Ser	Met	Leu	Phe	Val	Ser	Leu	Tyr	Lys	His	Met
		35					40					45			
His	Trp	Met	Gln	Ser	Glu	Ser	His	Lys	Leu	Ser	Ser	Ala	Arg	Thr	Glu
	50					55					60				
Ala	His	Ile	Asn	Ala	Leu	Lys	Thr	Val	Thr	Thr	Phe	Phe	Cys	Phe	Phe
65					70					75					80
Val	Ser	Tyr	Phe	Ala	Ala	Phe	Met	Ala	Asn	Met	Thr	Phe	Arg	Ile	Pro
				85					90					95	
Tyr	Arg	Ser	His	Gln	Phe	Phe	Val	Val	Lys	Glu	Ile	Met	Ala	Ala	Tyr
			100					105					110		
Pro	Ala	Gly	His	Ser	Val	Ile	Ile	Val	Leu	Ser	Asn	Ser	Lys	Phe	Lys
		115					120					125			
Asp	Leu	Phe	Arg	Arg	Met	Ile	Cys	Leu	Gln	Lys	Glu				
	130					135					140				

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<210> 66
<211> 71
<212> PRT
<213> Homo sapiens
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<400> 66
Ser Gln Tyr Ser Leu Gly His Ser Tyr Val Val Ile Phe Gly Tyr Gly
1          5          10          15

Gln Met Lys Lys Thr Phe Leu Gly Ile Leu Trp His Leu Lys Cys Gly
          20          25          30

Leu Lys Gly Arg Ala Leu Leu Ala Thr Gln Val Gly Leu Arg Glu Lys
          35          40          45

Ser Thr Arg Ser Leu Gly Val Ile Phe Leu Ala Ser Ser Tyr Ser Phe
          50          55          60

Phe Val Tyr Val Leu Cys His
65          70

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<210> 67
<211> 308
<212> PRT
<213> Homo sapiens
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<400> 67
Met Ile Thr Phe Leu Leu Ile Ile Leu Ser Ile Leu Val Val Phe Ala
1          5          10          15

Phe Val Leu Gly Asn Phe Ser Asn Gly Phe Ile Ala Leu Val Asn Val
          20          25          30

Ile Asp Trp Val Asn Thr Arg Lys Ile Ser Ser Ala Asp Gln Ile Leu
          35          40          45

```

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Ile Leu Leu
 50 55 60
 His Trp Tyr Ala Asn Val Leu Asn Pro Ala Leu Tyr Ser Ser Glu Val
 65 70 75 80
 Ile Ile Phe Ile Ser Asn Ile Ser Ala Ile Ile Asn His Phe Ser Ile
 85 90 95
 Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Val Asn
 100 105 110
 Phe Ser Arg Leu Ile Phe His His Leu Lys Arg Lys Ala Lys Ser Val
 115 120 125
 Val Leu Val Ile Val Leu Gly Pro Leu Val Phe Leu Val Cys His Leu
 130 135 140
 Val Met Lys His Thr Tyr Ile Asn Val Trp Thr Lys Glu Tyr Glu Gly
 145 150 155 160
 Asn Val Thr Trp Lys Ile Lys Leu Arg Asn Ala Ile His Leu Ser Asn
 165 170 175
 Leu Thr Val Ser Thr Leu Ala Asn Leu Ile Pro Phe Thr Leu Thr Leu
 180 185 190
 Ile Ser Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
 195 200 205
 Met Gln Leu His Ser Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
 210 215 220
 Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Met Leu Phe Ala Ile
 225 230 235 240
 Tyr Phe Leu Tyr Leu Ile Thr Ser Thr Trp Asn Leu Thr Gln Gln Ser
 245 250 255
 Lys Leu Val Phe Met Phe Cys Gln Thr Leu Gly Ile Met Tyr Pro Ser
 260 265 270
 Phe His Ser Phe Ile Leu Ile Met Gly Ser Arg Lys Leu Lys Gln Thr
 275 280 285
 Phe Leu Ser Val Leu Cys Gln Val Thr Cys Leu Val Lys Gly Gln Gln
 290 295 300
 Pro Ser Thr Pro
 305

<210> 68

<211> 34

<212> PRT

<213> Homo sapiens

<400> 68

Phe Ile Gly Leu Thr Asp Cys Ile Ala Trp Met Arg Asn Gln Lys Leu
 1 5 10 15

Cys Met Val Gly Phe Ile Leu Thr Arg Met Ala Leu Ala Arg Ile Asn
 20 25 30

Ile Leu

<210> 69

<211> 293

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (75)..(97)

<223> Variable amino acid

<400> 69

Leu Glu Leu Ile Phe Ser Lys Val Val Ala Thr Arg Gly Leu Val Leu
 1 5 10 15

Gly Met Leu Gly Asn Gly Leu Ile Gly Leu Val Asn Cys Ile Glu Trp
 20 25 30

Ala Lys Ser Trp Lys Val Ser Ser Ala Asp Phe Ile Leu Thr Ser Leu
 35 40 45

Ala Ile Val Arg Ile Ile Arg Leu Tyr Leu Ile Leu Phe Asp Ser Phe
 50 55 60

Ile Met Val Leu Ser Pro His Leu Tyr Thr Xaa Xaa Xaa Xaa Xaa Xaa
 65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 85 90 95

Xaa Ser Leu Ser Ile Phe His Trp Phe Lys Thr Ala Asn Phe Ser Asn
 100 105 110

Leu Ile Phe Leu Pro Leu Lys Glu Glu Asp Asn Val Trp Leu Gly Asp
 115 120 125

Ala Val Gly Ala Leu Gly Ile Phe His Leu Ser Cys Ser Glu Asn His
 130 135 140

Gly Glu Val Cys Gly Gln Lys Asn Met Lys Glu Phe Cys Ser Gly Met
 145 150 155 160

Ile Lys Leu Arg Asn Ala Ile Gln Leu Ser Asn Leu Thr Val Thr Met
 165 170 175

Pro Ala Asn Val Thr Pro Cys Thr Leu Thr Leu Ile Ser Phe Leu Leu
 180 185 190

Leu Ile Tyr Ser Pro Cys Lys His Val Lys Lys Met Gln Leu His Gly
 195 200 205
 Lys Gly Ser Gln His Leu Ser Thr Lys Val His Ile Lys Val Leu Gln
 210 215 220
 Thr Val Ile Ser Phe Phe Leu Leu Cys Ala Ile Tyr Phe Val Ser Val
 225 230 235 240
 Ile Ile Ser Val Trp Ser Phe Lys Asn Leu Glu Asn Lys Pro Val Phe
 245 250 255
 Met Phe Cys Gln Ala Ile Gly Phe Ser Cys Ser Ser Ala His Pro Phe
 260 265 270
 Ile Leu Thr Met Gly Asn Lys Lys Leu Lys Gln Thr Tyr Leu Ser Val
 275 280 285
 Leu Trp Gln Met Arg
 290

<210> 70
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 70
 Met Ile Thr Phe Leu Pro Ile Ile Phe Ser Ile Leu Ile Val Val Ile
 1 5 10 15
 Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
 20 25 30
 Ile Glu Trp Val Lys Arg Gln Lys Ile Ser Phe Val Asp Gln Ile Leu
 35 40 45
 Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Leu Leu
 50 55 60
 His Trp Tyr Ala Thr Gln Leu Asn Pro Ala Phe Tyr Ser Val Glu Val
 65 70 75 80
 Arg Ile Thr Ala Tyr Asn Val Trp Ala Val Thr Asn His Phe Ser Ser
 85 90 95
 Trp Leu Ala Thr Ser Leu Ser Met Phe Tyr Leu Leu Arg Ile Ala Asn
 100 105 110
 Phe Ser Asn Leu Ile Phe Leu Arg Ile Lys Arg Arg Val Lys Ser Val
 115 120 125
 Val Leu Val Ile Leu Leu Gly Pro Leu Leu Phe Leu Val Cys His Leu
 130 135 140
 Phe Val Ile Asn Met Asp Glu Thr Val Trp Thr Lys Glu Tyr Glu Gly
 145 150 155 160

Asn Val Thr Trp Lys Ile Lys Leu Arg Ser Ala Met Tyr His Ser Asn
 165 170 175
 Met Thr Leu Thr Met Leu Ala Asn Phe Val Pro Leu Thr Leu Thr Leu
 180 185 190
 Ile Ser Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
 195 200 205
 Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
 210 215 220
 Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Leu Leu Cys Ala Ile
 225 230 235 240
 Tyr Phe Leu Ser Met Ile Ile Ser Val Cys Asn Leu Gly Arg Leu Glu
 245 250 255
 Lys Gln Pro Val Phe Met Phe Cys Gln Ala Ile Ile Phe Ser Tyr Pro
 260 265 270
 Ser Thr His Pro Phe Ile Leu Ile Leu Gly Asn Lys Lys Leu Lys Gln
 275 280 285
 Ile Phe Leu Ser Val Leu Arg His Val Arg Tyr Trp Val Lys Asp Arg
 290 295 300
 Ser Leu Arg Leu His Arg Phe Thr Arg Gly Ala Leu Cys Val Phe
 305 310 315

<210> 71
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 71
 Met Ala Thr Glu Leu Asp Lys Ile Phe Leu Ile Leu Ala Ile Ala Glu
 1 5 10 15
 Phe Ile Ile Ser Met Leu Gly Asn Val Phe Ile Gly Leu Val Asn Cys
 20 25 30
 Ser Glu Gly Ile Lys Asn Gln Lys Val Phe Ser Ala Asp Phe Ile Leu
 35 40 45
 Thr Cys Leu Ala Ile Ser Thr Ile Gly Gln Leu Leu Val Ile Leu Phe
 50 55 60
 Asp Ser Phe Leu Val Gly Leu Ala Ser His Leu Tyr Thr Thr Tyr Arg
 65 70 75 80
 Leu Gly Lys Thr Val Ile Met Leu Trp His Met Thr Asn His Leu Thr
 85 90 95
 Thr Trp Leu Ala Thr Cys Leu Ser Ile Phe Tyr Phe Phe Lys Ile Ala
 100 105 110

His Phe Pro His Ser Leu Phe Leu Trp Leu Arg Trp Arg Met Asn Gly
 115 120 125
 Met Ile Val Met Leu Leu Ile Leu Ser Leu Phe Leu Leu Ile Phe Asp
 130 135 140
 Ser Leu Val Leu Glu Ile Phe Ile Asp Ile Ser Leu Asn Ile Ile Asp
 145 150 155 160
 Lys Ser Asn Leu Thr Leu Tyr Leu Asp Glu Ser Lys Thr Leu Tyr Asp
 165 170 175
 Lys Leu Ser Ile Leu Lys Thr Leu Leu Ser Leu Thr Ser Phe Ile Pro
 180 185 190
 Phe Ser Leu Phe Leu Thr Ser Leu Leu Phe Leu Phe Leu Ser Leu Val
 195 200 205
 Arg His Thr Arg Asn Leu Lys Leu Ser Ser Leu Gly Ser Arg Asp Ser
 210 215 220
 Ser Thr Glu Ala His Arg Arg Ala Met Lys Met Val Met Ser Phe Leu
 225 230 235 240
 Phe Leu Phe Ile Val His Phe Phe Ser Leu Gln Val Ala Asn Trp Ile
 245 250 255
 Phe Phe Met Leu Trp Asn Asn Lys Cys Ile Lys Phe Val Met Leu Ala
 260 265 270
 Leu Asn Ala Phe Pro Ser Cys His Ser Phe Ile Leu Ile Leu Gly Asn
 275 280 285
 Ser Lys Leu Gln Gln Thr Ala Val Arg Leu Leu Trp His Leu Arg Asn
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 Tyr Thr Lys Thr Pro Asn Pro Leu Pro Leu
 305 310

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 <212> PRT
 <213> Homo sapiens

<400> 72
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 Ile Leu Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Ile Asn Phe Ile
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 Ala Trp Val Lys Lys Gln Lys Ile Ser Ser Ala Asp Gln Ile Ile Ala
 35 40 45
 Asp Lys Gln Ser Pro Glu Leu Val Cys Ser Gly
 50 55

<210> 73
 <211> 63
 <212> PRT
 <213> Homo sapiens

<400> 73
 Met Leu Asn Ala Leu Tyr Ser Ile Leu Ile Ile Ile Ile Asn Ile Phe
 1 5 10 15
 Leu Ile Gly Ile Leu Gly Asn Gly Phe Ile Thr Leu Val Asn Gly Ile
 20 25 30
 Asp Trp Val Lys Met Lys Arg Ser Ser Ile Leu Thr Ala Leu Thr Ile
 35 40 45
 Ser Arg Ile Cys Leu Ile Ser Val Ile Met Val Arg Trp Phe Ile
 50 55 60

<210> 74
 <211> 60
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<400> 74
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 Thr Val Leu Asn Pro Thr Ser Ser Asn Leu Lys Val Ile Ile Phe Ile
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 Ser Asn Ala Trp Ala Val Thr Asn His Phe Ser Ile Trp Leu Ala Thr
 35 40 45
 Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Val Asn
 50 55 60

<210> 75
 <211> 72
 <212> PRT
 <213> Homo sapiens

<400> 75
 Thr Val Thr Met Leu Ala Asn Leu Val Pro Phe Thr Val Thr Leu Ile
 1 5 10 15
 Ser Phe Leu Leu Leu Val Cys Ser Leu Cys Lys His Leu Lys Lys Met
 20 25 30
 His Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His Ile
 35 40 45
 Lys Val Leu Gln Thr Val Ile Ser Phe Leu Leu Leu Cys Ala Ile Tyr
 50 55 60

Phe Val Ser Val Ile Ile Ser Ser
65 70

<210> 76

<211> 299

<212> PRT

<213> Homo sapiens

<400> 76

Met	Ile	Thr	Phe	Leu	Pro	Ile	Ile	Phe	Ser	Ile	Leu	Val	Val	Val	Thr	
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			20					25					30			
Thr	Glu	Trp	Val	Lys	Arg	Gln	Lys	Ile	Ser	Phe	Ala	Asp	Gln	Ile	Val	
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Thr	Ala	Leu	Ala	Val	Ser	Arg	Val	Gly	Leu	Leu	Trp	Val	Leu	Leu	Leu	
	50					55					60					
Asn	Trp	Tyr	Ser	Thr	Val	Leu	Asn	Pro	Ala	Phe	Tyr	Ser	Val	Glu	Leu	
65					70					75					80	
Arg	Thr	Thr	Ala	Tyr	Asn	Ile	Trp	Ala	Val	Thr	Gly	His	Phe	Ser	Asn	
				85					90					95		
Trp	Pro	Ala	Thr	Ser	Leu	Ser	Ile	Phe	Tyr	Leu	Leu	Lys	Ile	Ala	Asn	
			100					105					110			
Phe	Ser	Asn	Leu	Ile	Phe	Leu	Arg	Leu	Lys	Arg	Arg	Val	Lys	Ser	Val	
		115					120					125				
Ile	Leu	Val	Val	Leu	Leu	Gly	Pro	Leu	Leu	Phe	Leu	Ala	Cys	His	Leu	
	130					135					140					
Phe	Val	Val	Asn	Met	Asn	Gln	Ile	Val	Trp	Thr	Lys	Glu	Tyr	Glu	Gly	
145					150					155					160	
Asn	Met	Thr	Trp	Lys	Ile	Lys	Leu	Arg	Arg	Ala	Met	Tyr	Leu	Ser	Asp	
				165					170					175		
Thr	Thr	Val	Thr	Met	Leu	Ala	Asn	Leu	Val	Pro	Phe	Thr	Val	Thr	Leu	
			180					185					190			
Ile	Ser	Phe	Leu	Leu	Leu	Val	Cys	Ser	Leu	Cys	Lys	His	Leu	Lys	Lys	
		195					200					205				
Met	Gln	Leu	His	Gly	Lys	Gly	Ser	Gln	Asp	Pro	Ser	Thr	Lys	Val	His	
	210					215					220					
Ile	Lys	Val	Leu	Gln	Thr	Val	Ile	Ser	Phe	Phe	Leu	Leu	Cys	Ala	Ile	
225					230					235					240	
Tyr	Phe	Val	Ser	Val	Ile	Ile	Ser	Val	Trp	Ser	Phe	Lys	Asn	Leu	Glu	
				245					250					255		

Asn Lys Pro Val Phe Met Phe Cys Gln Ala Ile Gly Phe Ser Cys Ser
 260 265 270

Ser Ala His Pro Phe Ile Leu Ile Trp Gly Asn Lys Lys Leu Lys Gln
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Thr Tyr Leu Ser Val Leu Trp Gln Met Arg Tyr
 290 295

<210> 77

<211> 335

<212> PRT

<213> Rattus sp.

<400> 77

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Phe Val Thr Gly Val Leu Ala Asn Gly Leu Ile Val Val Val His Ala
 20 25 30

Ile Asp Leu Ile Met Trp Lys Lys Met Ala Pro Leu Asp Leu Leu Leu
 35 40 45

Phe Cys Leu Ala Thr Ser Arg Ile Ile Leu Gln Leu Cys Ile Leu Phe
 50 55 60

Ala Gln Leu Cys Leu Phe Ser Leu Val Arg His Thr Leu Phe Glu Asp
 65 70 75 80

Asn Ile Thr Phe Val Phe Ile Ile Asn Glu Leu Ser Leu Trp Phe Ala
 85 90 95

Thr Trp Leu Gly Val Phe Tyr Cys Ala Lys Ile Ala Thr Ile Pro His
 100 105 110

Pro Leu Phe Leu Trp Leu Lys Met Arg Ile Ser Arg Leu Val Pro Trp
 115 120 125

Leu Ile Leu Gly Ser Val Leu Tyr Val Ile Ile Thr Thr Phe Ile His
 130 135 140

Ser Arg Glu Thr Ser Ala Ile Leu Lys Pro Ile Phe Ile Ser Leu Phe
 145 150 155 160

Pro Lys Asn Ala Thr Gln Val Gly Thr Gly His Ala Thr Leu Leu Ser
 165 170 175

Val Leu Val Leu Gly Leu Thr Leu Pro Leu Phe Ile Phe Thr Val Ala
 180 185 190

Val Leu Leu Leu Ile Tyr Ser Leu Trp Asn Tyr Ser Arg Gln Met Arg
 195 200 205

Thr Met Val Gly Thr Arg Glu Tyr Ser Gly His Ala His Ile Ser Ala
 210 215 220

Met Leu Ser Ile Leu Ser Phe Leu Ile Leu Tyr Leu Ser His Tyr Met
 225 230 235 240

Val Ala Val Leu Ile Ser Thr Gln Val Leu Tyr Leu Gly Ser Arg Thr
 245 250 255

Phe Val Phe Cys Leu Leu Val Ile Gly Met Tyr Pro Ser Ile His Ser
 260 265 270

Ile Val Leu Ile Leu Gly Asn Pro Lys Leu Lys Arg Asn Ala Lys Met
 275 280 285

Phe Ile Val His Cys Lys Cys Cys His Cys Thr Arg Ala Trp Val Thr
 290 295 300

Ser Arg Ser Pro Arg Leu Ser Asp Leu Pro Val Pro Pro Thr His Pro
 305 310 315 320

Ser Ala Asn Lys Thr Ser Cys Ser Glu Ala Cys Ile Met Pro Ser
 325 330 335

<210> 78
 <211> 1331
 <212> DNA
 <213> Rattus sp.

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 gcagtttgtc actgggggtct tggcaaattgg cctcattgtg gttgtccatg ctattgactt 180
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ctaattgtcc agcctgaggt ttaatcctag gtttggtact atttcaaaga gtaaagttga      1140
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gtaaacctca ccttgcaaga tgatgtcact gagaaagcag gacaaatgga gtctaggtcc      1260
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<210> 79

<211> 333

<212> PRT

<213> Rattus sp.

<400> 79

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Ile Phe Tyr Val Glu Ile Val Thr Gly Ile Leu Gly Asn Gly Phe Ile
          20          25          30

Ala Leu Val Asn Ile Met Asp Trp Leu Lys Arg Arg Arg Ile Ser Thr
          35          40          45

Ala Asp Gln Ile Leu Thr Ala Leu Ala Leu Thr Arg Leu Ile Tyr Val
          50          55          60

Trp Ser Val Leu Ile Cys Ile Leu Leu Leu Phe Leu Cys Pro His Leu
65          70          75          80

Ser Met Arg Pro Glu Met Phe Thr Ala Ile Gly Val Ile Trp Val Val
          85          90          95

Asp Asn His Phe Ser Ile Trp Leu Ala Thr Cys Leu Gly Val Phe Tyr
          100          105          110

Phe Leu Lys Ile Ala Ser Phe Ser Asn Ser Leu Phe Leu Tyr Leu Lys
          115          120          125

Trp Arg Val Lys Lys Val Val Leu Met Ile Ile Leu Ile Ser Leu Ile
          130          135          140

Phe Leu Met Leu Asn Ile Ser Ser Leu Gly Met Tyr Asp His Phe Ser
145          150          155          160

Ile Asp Val Tyr Glu Gly Asn Met Ser Tyr Asn Leu Val Asp Ser Thr
          165          170          175

His Phe Pro Arg Ile Phe Leu Phe Thr Asn Ser Ser Lys Val Phe Leu
          180          185          190

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Ile Ala Asn Ser Ser His Val Phe Leu Pro Ile Asn Ser Leu Phe Met
 195 200 205
 Leu Ile Pro Phe Thr Val Ser Leu Val Ala Phe Phe Val Leu Phe Leu
 210 215 220
 Ser Leu Trp Lys His His Lys Lys Met Gln Val Asn Ala Lys Gly Pro
 225 230 235 240
 Arg Asp Ala Ser Thr Met Ala His Thr Lys Ala Leu Gln Ile Gly Phe
 245 250 255
 Ser Phe Leu Leu Leu Tyr Ala Ile Tyr Leu Leu Phe Ile Ile Thr Gly
 260 265 270
 Ile Leu Asn Leu Asp Leu Met Arg Cys Ile Val Ile Leu Leu Phe Asp
 275 280 285
 His Ile Ser Gly Ala Val Phe Ser Ile Ser His Ser Phe Val Leu Ile
 290 295 300
 Leu Gly Asn Ser Lys Leu Arg Gln Ala Thr Leu Ser Val Leu Pro Cys
 305 310 315 320
 Leu Arg Cys Arg Ser Lys Asp Met Asp Thr Val Val Phe
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<210> 80

<211> 2438

<212> DNA

<213> Rattus sp.

<400> 80

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<210> 81
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 <212> PRT
 <213> Rattus sp.

<400> 81

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			20					25					30		
Phe	Arg	Glu	Trp	Met	His	Phe	Gln	Arg	Leu	Ser	Pro	Val	Glu	Ile	Ile
			35				40					45			
Leu	Ile	Ser	Leu	Gly	Ile	Ser	His	Phe	Cys	Leu	Gln	Trp	Thr	Ser	Met
	50					55					60				
Leu	Tyr	Asn	Phe	Gly	Thr	Tyr	Ser	Arg	Pro	Val	Leu	Leu	Phe	Trp	Lys
65					70					75					80
Val	Ser	Val	Val	Trp	Glu	Phe	Met	Asn	Val	Leu	Thr	Phe	Trp	Leu	Thr
				85					90					95	
Ser	Leu	Leu	Ala	Val	Leu	Tyr	Cys	Val	Lys	Val	Ser	Ser	Phe	Ser	His
			100					105					110		
Pro	Val	Phe	Leu	Trp	Leu	Arg	Leu	Lys	Ile	Leu	Lys	Leu	Val	Leu	Trp
		115					120					125			
Leu	Leu	Leu	Gly	Ala	Leu	Ile	Ala	Ser	Cys	Leu	Ser	Ile	Ile	Pro	Ser
	130					135					140				
Val	Val	Lys	Tyr	His	Ile	Gln	Met	Glu	Leu	Leu	Thr	Leu	Asp	His	Leu
145					150					155					160
Pro	Lys	Asn	Ser	Ser	Leu	Ile	Leu	Arg	Leu	Gln	Met	Phe	Glu	Trp	Tyr
				165					170					175	
Phe	Ser	Asn	Pro	Phe	Lys	Met	Ile	Gly	Phe	Gly	Val	Pro	Phe	Leu	Val
			180					185					190		
Phe	Leu	Ile	Ser	Ile	Ile	Leu	Leu	Thr	Val	Ser	Leu	Val	Gln	His	Trp
	195						200					205			
Gly	Gln	Met	Lys	His	Tyr	Ser	Ser	Ser	Ser	Ser	Ser	Leu	Arg	Ala	Gln
	210					215						220			
Cys	Thr	Val	Leu	Lys	Ser	Leu	Ala	Thr	Phe	Phe	Ile	Phe	Phe	Thr	Ser
225					230					235					240
Tyr	Phe	Leu	Thr	Ile	Val	Val	Ser	Phe	Ile	Gly	Thr	Val	Phe	Asp	Lys
				245					250					255	
Lys	Ser	Trp	Phe	Trp	Val	Cys	Glu	Ala	Val	Ile	Tyr	Gly	Leu	Val	Cys
			260					265					270		

Ile His Phe Thr Ser Leu Met Met Ser Asn Pro Thr Leu Lys Lys Ala
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Leu Arg Leu Gln Phe Trp Ser Pro Glu Ser Ser
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<210> 82
 <211> 6552
 <212> DNA
 <213> Rattus sp.

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<212> PRT
<213> Rattus sp.

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Met Glu Tyr Ala Lys Asn Lys Lys Leu Ser Lys Ile Gly Phe Ile Leu
35          40          45
Ile Gly Leu Ala Ile Ser Arg Ile Gly Val Val Trp Ile Ile Ile Leu
50          55          60
Gln Gly Tyr Met Gln Val Phe Phe Pro His Ile Leu Thr Phe Gly Asn
65          70          75          80
Ile Thr Glu Tyr Ile Thr Tyr Ile Trp Val Phe Leu Asn His Leu Ser
85          90          95
Val Trp Phe Ala Thr Asn Leu Asn Ile Leu Tyr Phe Leu Lys Ile Ala
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 145 150 155 160
 Asn Thr Ser Trp Leu Gln Gln Gln Lys Asn Val Phe Leu Ile Asn Gln
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 Ser Leu Thr Asn Leu Gly Ile Phe Phe Phe Ile Ile Val Ser Leu Ile
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 Thr Cys Phe Leu Leu Ile Val Phe Leu Trp Arg His Ile Arg Gln Met
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 His Ser Asp Gly Ser Gly Leu Arg Asp Leu Asn Thr Glu Ala His Val
 210 215 220
 Lys Ala Met Arg Val Leu Ile Ser Phe Ala Val Leu Phe Ile Leu His
 225 230 235 240
 Phe Val Gly Leu Ser Ile Gln Val Leu Cys Phe Phe Leu Pro Gln Asn
 245 250 255
 Asn Leu Leu Phe Ile Thr Gly Leu Ile Ala Thr Cys Leu Tyr Pro Cys
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 <212> DNA
 <213> Rattus sp.

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 <213> Rattus sp.

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 Thr Gly Leu Ala Ile Ser Arg Ile Cys Leu Val Trp Ile Leu Ile Thr
 50 55 60
 Glu Ala Tyr Ile Lys Ile Phe Ser Pro Gln Leu Leu Ser Pro Ile Asn
 65 70 75 80
 Ile Ile Glu Leu Ile Ser Tyr Leu Trp Ile Ile Thr Ser Gln Leu Asn
 85 90 95
 Val Trp Phe Ala Thr Ser Leu Ser Ile Phe Tyr Phe Leu Lys Ile Ala
 100 105 110
 Asn Phe Ser His His Ile Phe Leu Trp Leu Lys Arg Arg Ile Asn Ile
 115 120 125
 Val Phe Ala Phe Leu Ile Gly Cys Leu Leu Met Ser Trp Leu Phe Ser
 130 135 140
 Phe Pro Val Val Val Lys Met Val Lys Asp Lys Lys Met Leu Tyr Ile
 145 150 155 160
 Asn Ser Ser Trp Gln Ile His Met Lys Lys Ser Glu Leu Ile Ile Asn
 165 170 175
 Tyr Val Phe Thr Asn Gly Gly Val Phe Leu Leu Phe Ile Ile Met Leu
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 Ile Val Cys Phe Leu Leu Ile Ile Ser Leu Trp Arg His Ser Lys Trp
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 Met Gln Ser Asn Glu Ser Gly Phe Arg Asp Leu Asn Thr Glu Val His
 210 215 220
 Val Lys Thr Ile Lys Val Leu Leu Ser Phe Ile Ile Leu Phe Ile Leu
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 His Leu Ile Gly Ile Thr Ile Asn Val Ile Cys Leu Leu Val Pro Glu
 245 250 255
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 <213> Rattus sp.

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 35 40 45
 Leu Asp Cys Ile Ile Leu Val Gln Tyr Pro Asp Thr Tyr Asn Arg Gly
 50 55 60
 Lys Glu Met Arg Ile Ile Asp Phe Phe Trp Thr Leu Thr Asn His Leu
 65 70 75 80
 Ser Val Trp Phe Ala Thr Cys Leu Ser Ile Phe Tyr Phe Phe Lys Ile
 85 90 95
 Ala Asn Phe Phe His Pro Leu Phe Leu Trp Ile Lys Trp Arg Ile Asp
 100 105 110
 Lys Leu Ile Leu Arg Thr Leu Leu Ala Cys Leu Ile Leu Ser Leu Cys
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 Phe Ser Leu Pro Val Thr Glu Asn Leu Ala Asp Asp Phe Arg Arg Cys
 130 135 140
 Val Lys Thr Lys Glu Arg Ile Asn Ser Thr Leu Arg Cys Lys Leu Asn
 145 150 155 160
 Lys Ala Gly Tyr Ala Ser Val Lys Val Asn Leu Asn Leu Val Met Leu
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 180 185 190
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 Asp Pro Ser Thr Thr Ala His Val Lys Ala Thr Lys Ala Val Ile Ser
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 Phe Leu Val Leu Phe Ile Val Tyr Cys Leu Ala Phe Leu Ile Ala Thr
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 Ser Ser Tyr Phe Met Pro Glu Ser Glu Leu Ala Val Ile Trp Gly Glu
 245 250 255
 Leu Ile Ala Leu Ile Tyr Pro Ser Ser His Ser Phe Ile Leu Ile Leu
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 Gly Asn Ser Lys Leu Lys Gln Ala Ser Val Arg Val Leu Cys Arg Val
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 <213> Rattus sp.

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<212> PRT
<213> Rattus sp.

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50          55          60
Cys Phe Lys Ile Val Tyr Gly Ser Ser Ser Phe Ile Phe Gly Met Lys
65          70          75          80
Leu Gln Ile Leu Tyr Phe Ala Trp Ile Leu Ser Ser His Phe Ser Leu
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Trp Phe Ala Thr Ala Leu Ser Ile Phe Tyr Leu Leu Arg Ile Ala Asn
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 Ser Glu Asp Ser Met Glu Thr Asp Phe Ala Lys Phe Thr Glu Leu Ile
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 180 185 190
 Ile Ser Phe Leu Leu Leu Ile Phe Ser Leu Trp Lys His Leu Gln Lys
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 Met Gln Leu Ser Ser Arg Gly His Gly Asp Pro Ser Thr Lys Ala His
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 Arg Asn Ala Leu Arg Ile Met Val Ser Phe Leu Leu Leu Tyr Thr Ser
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 Tyr Phe Leu Ser Leu Leu Ile Ser Trp Ile Ala Gln Lys His His Ser
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 Lys Leu Val Asp Ile Ile Gly Ile Ile Thr Glu Leu Met Tyr Pro Ser
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Asp Leu Arg Ala Thr
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 <213> Rattus sp.

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aactgaggca aacagttgtg gtcactcttg atatttacca gttgaaactg aagaacagtg 1860
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<210> 95

<211> 137

<212> PRT

<213> Rattus sp.

<400> 95

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Met Phe Leu His Thr Ile Lys Gln Arg Asp Ile Phe Thr Leu Ile Ile
1           5           10           15

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Ile Phe Phe Val Glu Ile Thr Met Gly Ile Leu Gly Asn Gly Phe Ile
          20           25           30

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Ala Leu Val Asn Ile Val Asp Trp Ile Lys Arg Arg Arg Ile Ser Ser
 35 40 45

Val Asp Lys Ile Leu Thr Thr Leu Ala Leu Thr Arg Leu Ile Tyr Ala
 50 55 60

Trp Ser Met Leu Ile Phe Ile Leu Leu Phe Ile Leu Gly Pro His Leu
 65 70 75 80

Ile Met Arg Ser Glu Ile Leu Thr Ser Met Gly Val Ile Trp Val Val
 85 90 95

Asn Asn His Phe Ser Ile Trp Leu Ala Thr Cys Leu Gly Val Phe Tyr
 100 105 110

Phe Leu Lys Ile Ala Asn Phe Ser Asn Ser Leu Phe Leu Tyr Leu Lys
 115 120 125

Trp Arg Val Lys Lys Val Val Leu Met
 130 135

<210> 96
 <211> 818
 <212> DNA
 <213> Rattus sp.

<400> 96
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 gggaatcaaa tttccttcct gatagggttag cttatgagaa ttcagcatct tattcaactt 180
 cagaaaattg gatataagat acagtgtctg gatgaagccg aattgatcta tttggggaga 240
 aaaaacgcc aacatttataa taagggtttta tgagacagtt cctgggaaat ttggatattt 300
 cctagttagt aatgtgtaaa tgggattttta aaacatgatt attttgtatt tttaacaacc 360
 aacatgagga gcttttttaa tgccacttag acattataaa ctgaagcatg ttcttacaca 420
 caataaagca acgtgatatt tttactttga taatcatatt ttttgtggaa ataacaatgg 480
 gaatcttagg aaatggattc atagcactag tgaacattgt ggactggatc aagagaagaa 540
 ggatttcttc agtggataag attctcacta ccttggccct taccagactc atttatgcgt 600
 ggtctatgct cattttttata ttgttattca tactggggccc gcatttgatt atgagatcag 660
 aaatacttac atcaatgggt gttatctggg tggatgaaca tcaacttcagc atctggcttg 720
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 ttacacataa gtggagagtt aaaaaagtgg ttttaatg 818

<210> 97
 <211> 104
 <212> PRT
 <213> Rattus sp.

<400> 97
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 1 5 10 15
 Lys Ser Lys Lys Ile Ser Leu Ser Asp Phe Ile Ile Thr Ser Leu Ala
 20 25 30
 Leu Phe Arg Ile Phe Leu Leu Trp Ile Ile Phe Thr Asp Ser Leu Ile
 35 40 45
 Ile Val Phe Ser Tyr His Ala His Asp Ser Gly Ile Arg Met Gln Leu
 50 55 60
 Ile Asp Val Phe Trp Thr Phe Thr Thr His Phe Ser Ile Trp Leu Ile
 65 70 75 80
 Ser Cys Leu Ser Val Phe Tyr Cys Leu Lys Ile Ala Thr Phe Ser His
 85 90 95
 Pro Ser Phe Leu Leu Lys Ser Arg
 100

<210> 98
 <211> 315
 <212> DNA
 <213> Rattus sp.

<400> 98
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 atcatcttta ctgatagcct cataatagtg ttctcttacc acgcccacga ctcagggata 180
 aggatgcaac ttattgatgt tttctggaca ttacaaccc acttcagtat ttggcttata 240
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 tagctcaaat ctaga 315

<210> 99
 <211> 308
 <212> PRT
 <213> Rattus sp.

<400> 99
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 1 5 10 15
 Cys Phe Leu Gly Ile Leu Ala Asn Gly Phe Ile Val Leu Met Leu Ser
 20 25 30

Arg Glu Trp Leu Trp Arg Gly Arg Leu Leu Pro Ser Asp Met Ile Leu
 35 40 45
 Leu Ser Leu Gly Thr Ser Arg Phe Cys Gln Gln Cys Val Gly Leu Val
 50 55 60
 Asn Ser Phe Tyr Tyr Ser Leu His Leu Val Glu Tyr Ser Arg Ser Leu
 65 70 75 80
 Ala Arg Gln Leu Ile Ser Leu His Met Asp Phe Leu Asn Ser Ala Thr
 85 90 95
 Phe Trp Phe Gly Thr Trp Leu Ser Val Leu Phe Cys Ile Lys Ile Ala
 100 105 110
 Asn Phe Ser His Pro Ala Phe Leu Trp Leu Lys Trp Arg Phe Pro Ala
 115 120 125
 Leu Val Pro Trp Leu Leu Leu Gly Ser Ile Leu Val Ser Phe Ile Val
 130 135 140
 Thr Leu Met Phe Phe Trp Gly Asn His Thr Val Tyr Gln Ala Phe Leu
 145 150 155 160
 Arg Arg Lys Phe Ser Gly Asn Thr Thr Phe Lys Glu Trp Asn Arg Arg
 165 170 175
 Leu Glu Ile Asp Tyr Phe Met Pro Leu Lys Leu Val Thr Thr Ser Ile
 180 185 190
 Pro Cys Ser Leu Phe Leu Val Ser Ile Leu Leu Leu Ile Asn Ser Leu
 195 200 205
 Arg Arg His Ser Gln Arg Met Gln His Asn Ala His Ser Leu Gln Asp
 210 215 220
 Pro Asn Thr Gln Ala His Ser Arg Ala Leu Lys Ser Leu Ile Ser Phe
 225 230 235 240
 Leu Val Leu Tyr Ala Leu Ser Tyr Val Ser Met Val Ile Asp Ala Thr
 245 250 255
 Val Val Ile Ser Ser Asp Asn Val Trp Tyr Trp Pro Trp Gln Ile Ile
 260 265 270
 Leu Tyr Leu Cys Met Ser Val His Pro Phe Ile Leu Ile Thr Asn Asn
 275 280 285
 Leu Lys Phe Arg Gly Thr Phe Arg Gln Leu Leu Leu Leu Ala Arg Gly
 290 295 300
 Phe Trp Val Thr
 305

<210> 100
 <211> 1295
 <212> DNA
 <213> Rattus sp.

<400> 100
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 actccaggag ccttgcccggt caactcatta gtcttcacat ggacttcttg aactcagcca 360
 ctttctgggt tggcacctgg ctccagcgtc tgttctgtat caagattgct aacttctccc 420
 atcctgcctt cctgtgggtg aagtggagat tcccagcatt ggtgccttgg ctccactagg 480
 gctctatctt ggtgtccttc atcgtaactc tgatgttctt ttggggaaac cacactgtct 540
 atcaggcatt cttaaggaga aagttttctg ggaacacaac cttaaggag tggaacagaa 600
 ggctggaaat agactatttc atgcctctga aacttgtcac caggtcaatt ccttgctctc 660
 tttttctagt ctcaattttg ctggtgatca attctctcag aaggcattca caaagaatgc 720
 agcacaatgc tcacagcttg caagaccca acaccaggc tcacagcaga gccctgaagt 780
 cactcatctc atttctgggt ctttacgcgc tgcctatgt gtccatggtc attgacgcta 840
 cagttgtcat ctccctcagat aacgtgtggt attggccctg gcaaattata ctttacttgt 900
 gcatgtccgt acatccatth atccttatca ctaataatct caagttccga ggcaccttca 960
 ggcagctact cctgttggcc aggggattct gggtgacct gaaggtttgg tctctttatc 1020
 tgtacccttt gaagagactt aggtgagggt gacttccctt ggaagtgatc tcatctacat 1080
 ggaaatgtct ttgtaggctg acatgggggc atactatgtg gttcctcctt gggaaagagg 1140
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 attctgaatc ctgaaccagt attgatctga agtgcaaagt acaatatgcc tgttcccttc 1260
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<210> 101
 <211> 332
 <212> PRT
 <213> Rattus sp.

<400> 101

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			20					25					30		
Asn	Val	Phe	Ile	Gly	Leu	Val	Asn	Tyr	Ser	Asp	Trp	Val	Lys	Asn	Lys
		35					40					45			
Lys	Ile	Thr	Phe	Ile	Asn	Phe	Ile	Leu	Ile	Cys	Leu	Ala	Ala	Ser	Arg
	50					55					60				
Ile	Ser	Ser	Val	Leu	Val	Val	Phe	Ile	Asp	Ala	Ile	Ile	Leu	Glu	Leu
65					70					75					80
Thr	Pro	His	Val	Tyr	His	Ser	Tyr	Ser	Arg	Val	Lys	Cys	Ser	Asp	Ile
				85					90					95	
Phe	Trp	Val	Ile	Thr	Asp	Gln	Leu	Ser	Thr	Trp	Leu	Ala	Thr	Cys	Leu
			100					105						110	
Ser	Ile	Phe	Tyr	Leu	Leu	Lys	Ile	Ala	His	Phe	Ser	His	Pro	Leu	Phe
		115					120					125			
Leu	Trp	Leu	Lys	Trp	Arg	Leu	Arg	Gly	Val	Leu	Val	Gly	Phe	Leu	Leu
	130					135					140				
Phe	Ser	Leu	Phe	Ser	Leu	Ile	Val	Tyr	Phe	Leu	Leu	Leu	Glu	Leu	Leu
145					150					155					160
Ser	Ile	Trp	Gly	Asp	Ile	Tyr	Val	Ile	Pro	Lys	Ser	Asn	Leu	Thr	Leu
				165					170					175	
Tyr	Ser	Glu	Thr	Ile	Lys	Thr	Leu	Ala	Phe	Gln	Lys	Ile	Ile	Val	Phe
			180					185						190	
Asp	Met	Leu	Tyr	Leu	Val	Pro	Phe	Leu	Val	Ser	Leu	Ala	Ser	Leu	Leu
		195					200					205			
Leu	Leu	Phe	Leu	Ser	Leu	Val	Lys	His	Ser	Gln	Asn	Leu	Asp	Arg	Ile
	210					215					220				
Ser	Thr	Thr	Ser	Glu	Asp	Ser	Arg	Ala	Lys	Ile	His	Lys	Lys	Ala	Met
225					230					235					240
Lys	Met	Leu	Leu	Ser	Phe	Leu	Val	Leu	Phe	Ile	Ile	His	Ile	Phe	Cys
				245					250					255	
Met	Gln	Leu	Ser	Arg	Trp	Leu	Phe	Phe	Leu	Phe	Pro	Asn	Asn	Arg	Ser
			260					265					270		
Thr	Asn	Phe	Leu	Leu	Leu	Thr	Leu	Asn	Ile	Phe	Pro	Leu	Ser	His	Thr
		275					280					285			
Phe	Ile	Ile	Ile	Leu	Gly	Asn	Ser	Lys	Leu	Arg	Gln	Arg	Ala	Met	Arg
	290					295					300				

Val Leu Gln His Leu Lys Ser Gln Leu Gln Glu Leu Ile Leu Ser Leu
 305 310 315 320

His Arg Leu Ser Arg Val Phe Thr Met Glu Ile Ala
 325 330

<210> 102
 <211> 1287
 <212> DNA
 <213> Rattus sp.

<400> 102
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 gcaagataac tatgggaaag gatgattttc ggtggatggt tgagaactga gcagcaaggc 180
 aaattgatag atgtgtggat tccctctttc tattcaactg cttactggat tggttcaaatt 240
 gtacgtgata ttgataatag cagtgtttac acctggaatg ctggggaatg tgttcattgg 300
 actggtaaac tactctgact gggtaaaaaa caagaaaatc accttcatca acttcatcct 360
 gatctgtttg gcagcgtcca gaatcagctc tgtgttggtg gtatttattg atgcaatcat 420
 cctagaacta actcctcatg tctatcatc ttcagtcga gtgaaatgct ctgatataatt 480
 ctgggttata actgaccagc tgtcaacgtg gcttgccacc tgcctcagca ttttctactt 540
 actcaaaata gcccaattct cccatcccct tttcctttgg ttgaagtggg gattgagagg 600
 agtgcttggt gggtttcttc tattttcttt gttctcattg attgtttatt ttctactcct 660
 ggaattactg tctatttggg gagatattta tgtgatccct aaaagcaatc tgactttata 720
 ttcagaaaca attaagacct ttgcttttca aaagataatt gtttttgata tgctatattt 780
 agtcccatth cttgtgtccc tagcctcatt gtccttttca tttttatcct tgggtgaagca 840
 ctcccaaac cttgacagga tttctaccac ctctgaagat tccagagcca agatccacaa 900
 gaaggccatg aaaatgctat tatctttcct cgttctcttt ataattcaca ttttttgcatt 960
 gcagttgtca cgggtgggtat tctttttggt tccaaacaac aggtcaacta attttctttt 1020
 gttaacatta aacatcttcc cattatctca tacattcatt atcatcctgg gaaacagcaa 1080
 gcttcgacaa agagcaatga gggtcctgca acatcttaaa agccaacttc aagagttgat 1140
 cctctcccct catagattgt ccagagtctt cactatggaa atagcttaaa ggggagactt 1200
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 gaactatccc tagtgcatac tgatatt 1287

<210> 103
 <211> 68
 <212> PRT
 <213> Rattus sp.

<400> 103
 Val Ala Asn Ile Met Asp Trp Val Lys Arg Arg Lys Leu Ser Ala Val
 1 5 10 15
 Asp Gln Leu Leu Thr Val Leu Ala Ile Ser Arg Ile Thr Leu Leu Trp
 20 25 30
 Ser Leu Tyr Ile Leu Lys Ser Thr Phe Ser Met Val Pro Asn Phe Glu
 35 40 45
 Val Ala Ile Pro Ser Thr Arg Leu Thr Asn Leu Val Trp Ile Ile Ser
 50 55 60
 Asn His Phe Asn
 65

<210> 104
 <211> 206
 <212> DNA
 <213> Rattus sp.

<400> 104
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 tcactgtgct ggccatctcc agaatcactc tggtgtggtc attgtacata ctgaaatcaa 120
 cattttcaat ggtgccaaac tttgaggtag ctataccgtc aacaagacta actaatcttg 180
 tctggataat ttctaaccat tttaat 206

<210> 105
 <211> 327
 <212> PRT
 <213> Mus musculus

<400> 105
 Met Gln His Leu Leu Lys Thr Ile Phe Val Ile Cys His Ser Thr Leu
 1 5 10 15
 Ala Ile Ile Leu Ile Phe Glu Leu Ile Ile Gly Ile Leu Gly Asn Gly
 20 25 30
 Phe Met Ala Leu Val His Cys Met Asp Trp Val Lys Arg Lys Lys Met
 35 40 45
 Ser Leu Val Asn Lys Ile Leu Thr Ala Leu Ala Ile Ser Arg Ile Phe
 50 55 60
 His Leu Ser Leu Leu Leu Ile Ser Leu Val Ile Phe Phe Ser Tyr Ser
 65 70 75 80

Asp Ile Pro Met Thr Ser Arg Met Thr Gln Val Ser Asn Asn Val Trp
 85 90 95
 Ile Ile Val Asn His Phe Ser Ile Trp Leu Ser Thr Cys Leu Ser Val
 100 105 110
 Leu Tyr Phe Leu Lys Ile Ser Asn Phe Ser Asn Ser Phe Phe Leu Tyr
 115 120 125
 Leu Lys Trp Arg Val Glu Lys Val Val Ser Val Thr Leu Leu Val Ser
 130 135 140
 Leu Leu Leu Leu Ile Leu Asn Ile Leu Leu Ile Asn Leu Glu Ile Ser
 145 150 155 160
 Ile Cys Ile Lys Glu Cys Gln Arg Asn Ile Ser Cys Ser Phe Ser Ser
 165 170 175
 His Tyr Tyr Ala Lys Cys His Arg Gln Val Ile Arg Leu His Ile Ile
 180 185 190
 Phe Leu Ser Val Pro Val Val Leu Ser Leu Ser Thr Phe Leu Leu Leu
 195 200 205
 Ile Phe Ser Leu Trp Thr Leu His Gln Arg Met Gln Gln His Val Gln
 210 215 220
 Gly Gly Arg Asp Ala Arg Thr Thr Ala His Phe Lys Ala Leu Gln Thr
 225 230 235 240
 Val Ile Ala Phe Phe Leu Leu Tyr Ser Ile Phe Ile Leu Ser Val Leu
 245 250 255
 Ile Gln Asn Glu Leu Leu Lys Lys Asn Leu Phe Val Val Phe Cys Glu
 260 265 270
 Val Val Tyr Ile Ala Phe Pro Thr Phe His Ser Tyr Ile Leu Ile Val
 275 280 285
 Gly Asp Met Lys Leu Arg Gln Ala Cys Leu Pro Leu Cys Ile Ile Ala
 290 295 300
 Ala Glu Ile Gln Thr Thr Leu Cys Arg Asn Phe Arg Ser Leu Lys Tyr
 305 310 315 320
 Phe Arg Leu Cys Cys Ile Phe
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<210> 106

<211> 1374

<212> DNA

<213> Mus musculus

<400> 106

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tgcaatcatt ttaatctttg aattaataat tggaatttta ggaaatgggt tcatggccct 360
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caagatatcc aatttttcta actctttttt tctttatcta aagtggagag ttgaaaaagt 660
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<210> 107

<211> 327

<212> PRT

<213> Mus musculus

<400> 107

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Met Glu Ser Val Leu His Asn Phe Ala Thr Val Leu Ile Tyr Val Glu
1          5          10          15

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Phe Ile Phe Gly Asn Leu Ser Asn Gly Phe Ile Val Leu Ser Asn Phe
20          25          30

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Leu Asp Trp Val Ile Lys Gln Lys Leu Ser Leu Ile Asp Lys Ile Leu
35          40          45

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Leu	Thr	Leu	Ala	Ile	Ser	Arg	Ile	Thr	Leu	Ile	Trp	Glu	Ile	Tyr	Ala	50	55	60	
Trp	Phe	Lys	Ser	Leu	Tyr	Asp	Pro	Ser	Ser	Phe	Leu	Ile	Gly	Ile	Glu	65	70	75	80
Phe	Gln	Ile	Ile	Tyr	Phe	Ser	Trp	Val	Leu	Ser	Ser	His	Phe	Ser	Leu	85	90	95	
Trp	Leu	Ala	Thr	Thr	Leu	Ser	Val	Phe	Tyr	Leu	Leu	Arg	Ile	Ala	Asn	100	105	110	
Cys	Ser	Trp	Gln	Ile	Phe	Leu	Tyr	Leu	Lys	Trp	Arg	Leu	Lys	Gln	Leu	115	120	125	
Ile	Val	Gly	Met	Leu	Leu	Gly	Ser	Leu	Val	Phe	Leu	Leu	Gly	Asn	Leu	130	135	140	
Met	Gln	Ser	Met	Leu	Glu	Glu	Arg	Phe	Tyr	Gln	Tyr	Gly	Arg	Asn	Thr	145	150	155	160
Ser	Val	Asn	Thr	Met	Ser	Asn	Asp	Leu	Ala	Met	Trp	Thr	Glu	Leu	Ile	165	170	175	
Phe	Phe	Asn	Met	Ala	Met	Phe	Ser	Val	Ile	Pro	Phe	Thr	Leu	Ala	Leu	180	185	190	
Ile	Ser	Phe	Leu	Leu	Leu	Ile	Phe	Ser	Leu	Trp	Lys	His	Leu	Gln	Lys	195	200	205	
Met	Gln	Leu	Ile	Ser	Arg	Arg	His	Arg	Asp	Pro	Ser	Thr	Lys	Ala	His	210	215	220	
Met	Asn	Ala	Leu	Arg	Ile	Met	Val	Ser	Phe	Leu	Leu	Leu	Tyr	Thr	Met	225	230	235	240
His	Phe	Leu	Ser	Leu	Leu	Ile	Ser	Trp	Ile	Ala	Gln	Lys	His	Gln	Ser	245	250	255	
Glu	Leu	Ala	Asp	Ile	Ile	Gly	Met	Ile	Thr	Glu	Leu	Met	Tyr	Pro	Ser	260	265	270	
Val	His	Ser	Cys	Ile	Leu	Ile	Leu	Gly	Asn	Ser	Lys	Leu	Lys	Gln	Thr	275	280	285	
Ser	Leu	Cys	Met	Leu	Arg	His	Leu	Arg	Cys	Arg	Leu	Lys	Gly	Glu	Asn	290	295	300	
Ile	Thr	Ile	Ala	Tyr	Ser	Asn	Gln	Ile	Thr	Ser	Phe	Cys	Val	Phe	Cys	305	310	315	320
Val	Ala	Asn	Lys	Ser	Met	Arg										325			

<210> 108

<211> 1759

<212> DNA

<213> Mus musculus

<400> 108

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gtggagttta tttttgggaa tttgagcaat ggattcatag tgttgtcaaa cttcttggac	180
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agaatcactc tcatctggga aatatatgct tgggttataaa gtttatatga tccatcttcc	300
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<210> 109
 <211> 312
 <212> PRT
 <213> Mus musculus

<400> 109
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 20 25 30
 Leu Val Asn Ile Ile Asp Trp Val Lys Arg Gly Lys Ile Ser Ala Val
 35 40 45
 Asp Lys Thr Tyr Met Ala Leu Ala Ile Ser Arg Thr Ala Phe Leu Leu
 50 55 60
 Ser Leu Ile Thr Gly Phe Leu Val Ser Leu Leu Asp Pro Ala Leu Leu
 65 70 75 80
 Gly Met Arg Thr Met Val Arg Leu Leu Thr Ile Ser Trp Met Val Thr
 85 90 95
 Asn His Phe Ser Val Trp Phe Ala Thr Cys Leu Ser Ile Phe Tyr Phe
 100 105 110
 Leu Lys Ile Ala Asn Phe Ser Asn Ser Ile Phe Leu Val Leu Lys Trp
 115 120 125
 Glu Ala Lys Lys Val Val Ser Val Thr Leu Val Val Ser Val Ile Ile
 130 135 140
 Leu Ile Met Asn Ile Ile Val Ile Asn Lys Phe Thr Asp Arg Leu Gln
 145 150 155 160
 Val Asn Thr Leu Gln Asn Cys Ser Thr Ser Asn Thr Leu Lys Asp Tyr
 165 170 175
 Gly Leu Phe Leu Phe Ile Ser Thr Gly Phe Thr Leu Thr Pro Phe Ala
 180 185 190
 Val Ser Leu Thr Met Phe Leu Leu Leu Ile Phe Ser Leu Trp Arg His
 195 200 205
 Leu Lys Asn Met Cys His Ser Ala Thr Gly Ser Arg Asp Val Ser Thr
 210 215 220

Val Ala His Ile Lys Gly Leu Gln Thr Val Val Thr Phe Leu Leu Leu
 225 230 235 240

Tyr Thr Ala Phe Val Met Ser Leu Leu Ser Glu Ser Leu Asn Ile Asn
 245 250 255

Ile Gln His Thr Asn Leu Leu Ser His Phe Leu Arg Ser Ile Gly Val
 260 265 270

Ala Phe Pro Thr Gly His Ser Cys Val Leu Ile Leu Gly Asn Ser Lys
 275 280 285

Leu Arg Gln Ala Ser Leu Ser Val Ile Leu Trp Leu Arg Tyr Lys Tyr
 290 295 300

Lys His Ile Glu Asn Trp Gly Pro
 305 310

<210> 110
 <211> 1484

<212> DNA

<213> Mus musculus

<400> 110

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aatttttaga	aatgtattca	tagctctcgt	gaacatcata	gactgggtta	aaagaggaaa	420
gatctctgca	gtggataaga	cctatatggc	cctggccatc	tccaggactg	cttttttatt	480
gtcactaatc	acagggttct	tggtatcatt	attggacca	gctttattgg	gaatgagaac	540
gatggtaagg	ctccttacta	tttcctggat	ggtgaccaat	catttcagtg	tctggtttgc	600
aacatgcctc	agtatctttt	attttctcaa	gatagcta	ttctcaaatt	ctattttcct	660
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ccagaactgt	agtacaagta	acactttaaa	agattatggg	ctctttttat	tcattagcac	840
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cctgtggaga	catctgaaga	atatgtgtca	cagtgccaca	ggctccagag	atgtcagcac	960
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<210> 111

<211> 302

<212> PRT

<213> Mus musculus

<400> 111

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Met Leu Ser Ala Leu Glu Ser Ile Leu Leu Ser Val Ala Thr Ser Glu
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Ala Met Leu Gly Val Leu Gly Asn Thr Phe Ile Val Leu Val Asn Tyr
          20           25           30

Thr Asp Trp Val Arg Asn Lys Lys Leu Ser Lys Ile Asn Phe Ile Leu
          35           40           45

Thr Gly Leu Ala Ile Ser Arg Ile Phe Thr Ile Trp Ile Ile Thr Leu
          50           55           60

Asp Ala Tyr Thr Lys Val Phe Leu Leu Thr Met Leu Met Pro Ser Ser
65           70           75           80

Leu His Glu Cys Met Ser Tyr Ile Trp Val Ile Ile Asn His Leu Ser
          85           90           95

Val Trp Phe Ser Thr Ser Leu Gly Ile Phe Tyr Phe Leu Lys Ile Ala
          100          105          110

Asn Phe Ser His Tyr Ile Phe Leu Trp Met Lys Arg Arg Ala Asp Lys
          115          120          125

Val Phe Val Phe Leu Ile Val Phe Leu Ile Ile Thr Trp Leu Ala Ser
          130          135          140

Phe Pro Leu Ala Val Lys Val Ile Lys Asp Val Lys Ile Tyr Gln Ser
145          150          155          160

Asn Thr Ser Trp Leu Ile His Leu Glu Lys Ser Glu Leu Leu Ile Asn
          165          170          175

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Tyr Val Phe Ala Asn Met Gly Pro Ile Ser Leu Phe Ile Val Ala Ile
 180 185 190
 Ile Ala Cys Phe Leu Leu Thr Ile Ser Leu Trp Arg His Ser Arg Gln
 195 200 205
 Met Gln Ser Ile Gly Ser Gly Phe Arg Asp Leu Asn Thr Glu Ala His
 210 215 220
 Met Lys Ala Met Lys Val Leu Ile Ala Phe Ile Ile Leu Phe Ile Leu
 225 230 235 240
 Tyr Phe Leu Gly Ile Leu Ile Glu Thr Leu Cys Leu Phe Leu Thr Asn
 245 250 255
 Asn Lys Leu Leu Phe Ile Phe Gly Phe Thr Leu Ser Ala Met Tyr Pro
 260 265 270
 Cys Cys His Ser Phe Ile Leu Ile Leu Thr Ser Arg Glu Leu Lys Gln
 275 280 285
 Asp Thr Met Arg Ala Leu Gln Arg Leu Lys Cys Cys Glu Thr
 290 295 300

<210> 112

<211> 1529

<212> DNA

<213> Mus musculus

<400> 112

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tagggaacac atttattgta cttgtaaact acacagactg ggtcaggaat aagaaactct	180
ctaagattaa ctttattctc actggcttag caatttccag gatttttaacc atatggataa	240
taacttttaga tgcataatac aagggttttcc ttctgactat gcttatgccg agcagtctac	300
atgaatgcat gagttacata tgggtaatta ttaaccatct gagcgtttgg tttagcacca	360
gcctcggcat cttttatctt ctgaagatag caaatttttc ccactacata tttctctgga	420
tgaagagaag agctgataaa gtttttgtct ttctaattgt attcttaatt ataacgtggc	480
tagcttcctt tccgctagct gtgaaggcca ttaaagatgt taaaatatat cagagcaaca	540
catcctggct gatccacctg gagaagagtg agttacttat aaactatggt tttgccataa	600
tggggcccat ttccctcttt attgtagcca taattgcttg tttcttgta accatttccc	660
tttgagaca cagcaggcag atgcaatcca ttggatcagg attcagagat ctcaacacag	720
aagctcacat gaaagccatg aaagtcttaa ttgcatttat catcctcttt atcttatatt	780
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caactgattg actgcagcta cgccagtgtg agattttcat agtaagagca aacattgaaa    1140
ataagacttc tcagtcttat ttcattgagt ttctaaagca ttgacaccca ttcaccagaa    1200
aaaccaaagg ggaagagagg agttttcaga catgtgtgat gaatcttgat atttaggaca    1260
tggaattgag gagccagagg gatgctaccg tgtgtctaca gctttgtttg ttaaatagct    1320
acttttcctt tcccagttag ttaaagtaga tgcttggagt agtggtgaaa atcatggcag    1380
tagatgggat ctgtgggaag tggttgagga agcaggctgt ttctgaacga agagaccaga    1440
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<210> 113
<211> 300
<212> PRT
<213> Mus musculus

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<400> 113
Met Leu Ser Ala Ala Glu Gly Ile Leu Leu Ser Ile Ala Thr Val Glu
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Ala Gly Leu Gly Val Leu Gly Asn Thr Phe Ile Ala Leu Val Asn Cys
20          25          30
Met Asp Trp Ala Lys Asn Asn Lys Leu Ser Met Thr Gly Phe Leu Leu
35          40          45
Ile Gly Leu Ala Thr Ser Arg Ile Phe Ile Val Trp Leu Leu Thr Leu
50          55          60
Asp Ala Tyr Ala Lys Leu Phe Tyr Pro Ser Lys Tyr Phe Ser Ser Ser
65          70          75          80
Leu Ile Glu Ile Ile Ser Tyr Ile Trp Met Thr Val Asn His Leu Thr
85          90          95
Val Trp Phe Ala Thr Ser Leu Ser Ile Phe Tyr Phe Leu Lys Ile Ala
100         105         110
Asn Phe Ser Asp Cys Val Phe Leu Trp Leu Lys Arg Arg Thr Asp Lys
115         120         125
Ala Phe Val Phe Leu Leu Gly Cys Leu Leu Thr Ser Trp Val Ile Ser
130         135         140

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Phe Ser Phe Val Val Lys Val Met Lys Asp Gly Lys Val Asn His Arg
 145 150 155 160
 Asn Arg Thr Ser Glu Met Tyr Trp Glu Lys Arg Gln Phe Thr Ile Asn
 165 170 175
 Tyr Val Phe Leu Asn Ile Gly Val Ile Ser Leu Phe Met Met Thr Leu
 180 185 190
 Thr Ala Cys Phe Leu Leu Ile Met Ser Leu Trp Arg His Ser Arg Gln
 195 200 205
 Met Gln Ser Gly Val Ser Gly Phe Arg Asp Leu Asn Thr Glu Ala His
 210 215 220
 Val Lys Ala Ile Lys Phe Leu Ile Ser Phe Ile Ile Leu Phe Val Leu
 225 230 235 240
 Tyr Phe Ile Gly Val Ser Ile Glu Ile Ile Cys Ile Phe Ile Pro Glu
 245 250 255
 Asn Lys Leu Leu Phe Ile Phe Gly Phe Thr Thr Ala Ser Ile Tyr Pro
 260 265 270
 Cys Cys His Ser Phe Ile Leu Ile Leu Ser Asn Ser Gln Leu Lys Gln
 275 280 285
 Ala Phe Val Lys Val Leu Gln Gly Leu Lys Phe Phe
 290 295 300

<210> 114

<211> 903

<212> DNA

<213> Mus musculus

<400> 114

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ctttctatga ctggcttctt tctcatcggc ttagcaactt ccaggatttt tattgtgtgg      180
ctattaactt tagatgcata tgcaaagcta ttctatccaa gtaagtattt ttctagtagt      240
ctgattgaaa tcatctotta tatatggatg actgtgaatc acctgactgt ctggtttgcc      300
accagcctaa gcatcttcta tttcctgaag atagccaatt tttccgactg tgtatttctc      360
tggttgaaga ggagaactga taaagctttt gtttttctct tggggtgttt gctaacttca      420
tggttaattc ccttctcatt tgttgtgaag gtgatgaagg acggtaaagt gaatcataga      480
aacaggacct cggagatgta ctgggagaaa aggcaattca ctattaacta cgttttcctc      540
aatattggag tcatttctct ctttatgatg accttaactg catgtttctt gttaattatg      600

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tcactttgga gacacagcag gcagatgcag tctgggtgtt caggattcag agacctcaac 660
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tattttatag gtgttttcaat agaaattatc tgcattttta taccagaaaa caaactgcta 780
tttatttttg gtttcacaac tgcattccata tatccttgct gtcactcatt tattctaatt 840
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tag 903

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<210> 115

<211> 308

<212> PRT

<213> Mus musculus

<400> 115

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Met Leu Thr Val Ala Glu Gly Ile Leu Leu Cys Phe Val Thr Ser Gly
1          5          10          15

Ser Val Leu Gly Val Leu Gly Asn Gly Phe Ile Leu His Ala Asn Tyr
          20          25          30

Ile Asn Cys Val Arg Lys Lys Phe Ser Thr Ala Gly Phe Ile Leu Thr
          35          40          45

Gly Leu Ala Ile Cys Arg Ile Phe Val Ile Cys Ile Ile Ile Ser Asp
          50          55          60

Gly Tyr Leu Lys Leu Phe Ser Pro His Met Val Ala Ser Asp Ala His
          65          70          75          80

Ile Ile Val Ile Ser Tyr Ile Trp Val Ile Ile Asn His Thr Ser Ile
          85          90          95

Trp Phe Ala Thr Ser Leu Asn Leu Phe Tyr Leu Leu Lys Ile Ala Asn
          100          105          110

Phe Ser His Tyr Ile Phe Phe Cys Leu Lys Arg Arg Ile Asn Thr Val
          115          120          125

Phe Ile Phe Leu Leu Gly Cys Leu Phe Ile Ser Trp Ser Ile Ala Phe
          130          135          140

Pro Gln Thr Val Lys Ile Phe Asn Val Lys Lys Gln His Arg Asn Val
          145          150          155          160

Ser Trp Gln Val Tyr Leu Tyr Lys Asn Glu Phe Ile Val Ser His Ile
          165          170          175

Leu Leu Asn Leu Gly Val Ile Phe Phe Phe Met Val Ala Ile Ile Thr
          180          185          190

Cys Phe Leu Leu Ile Ile Ser Leu Trp Lys His Asn Arg Lys Met Gln
          195          200          205

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Leu Tyr Ala Ser Arg Phe Lys Ser Leu Asn Thr Glu Val His Val Lys
 210 215 220
 Val Met Lys Val Leu Ile Ser Phe Ile Ile Leu Leu Ile Leu His Phe
 225 230 235 240
 Ile Gly Ile Leu Ile Glu Thr Leu Ser Phe Leu Lys Tyr Glu Asn Lys
 245 250 255
 Leu Leu Leu Ile Leu Gly Leu Ile Ile Ser Cys Met Tyr Pro Cys Cys
 260 265 270
 His Ser Phe Ile Leu Ile Leu Ala Asn Ser Gln Leu Lys Gln Ala Ser
 275 280 285
 Leu Lys Ala Leu Lys Gln Leu Lys Cys His Lys Lys Asp Lys Asp Val
 290 295 300
 Arg Val Thr Trp
 305

<210> 116

<211> 1242

<212> DNA

<213> Mus musculus

<400> 116

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tgcatgcaaa ctacattaac tgtgtcagaa agaagtctc cacagctggc tttattctca	180
caggcttggc tatttgcaaga atctttgtca tatgtataat aatctctgat ggatatttaa	240
aattgttttc tccacatatg gttgcctctg atgccacat tatagtgatt tcttacatat	300
gggtaattat caatcataca agtatatggg ttgccaccag cctcaacctc ttctatctcc	360
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agaatgagtt cattgtaagc cacattcttc tcaacctggg agttatatcc ttctttatgg	600
tggtatcat tacatgcttc ctattaatta tttcactttg gaaacataac agaaagatgc	660
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ctctaaagac cgtttcactt ccaaattctt gcaattatctt aaaaaaaaaa gtcttgctga    1080
tatcatggaa tcatgggaaa tgttgcaatt gtgttttggg gacaggggtga ccagtgaagg    1140
tatggttaag cagcgaaaca ctcatacagc tcgttcgttc tttttgtatt ttattttgtg    1200
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<210> 117

<211> 308

<212> PRT

<213> Mus musculus

<400> 117

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Met Leu Asn Ser Ala Glu Gly Ile Leu Leu Cys Val Val Thr Ser Glu
1          5          10          15

Ala Val Leu Gly Val Leu Gly Asp Thr Tyr Ile Ala Leu Phe Asn Cys
          20          25          30

Met Asp Tyr Ala Lys Asn Lys Lys Leu Ser Lys Ile Gly Phe Ile Leu
          35          40          45

Ile Gly Leu Ala Ile Ser Arg Ile Gly Val Val Trp Ile Ile Ile Leu
          50          55          60

Gln Gly Tyr Ile Gln Val Phe Phe Pro His Met Leu Thr Ser Gly Asn
65          70          75          80

Ile Thr Glu Tyr Ile Thr Tyr Ile Trp Val Phe Leu Asn His Leu Ser
          85          90          95

Val Trp Phe Val Thr Asn Leu Asn Ile Leu Tyr Phe Leu Lys Ile Ala
          100          105          110

Asn Phe Ser Asn Ser Val Phe Leu Trp Leu Lys Arg Arg Val Asn Ala
          115          120          125

Val Phe Ile Phe Leu Ser Gly Cys Leu Leu Thr Ser Trp Leu Leu Cys
          130          135          140

Phe Pro Gln Met Thr Lys Ile Leu Gln Asn Ser Lys Met His Gln Arg
145          150          155          160

Asn Thr Ser Trp Val His Gln Arg Lys Asn Tyr Phe Leu Ile Asn Gln
          165          170          175

Ser Val Thr Asn Leu Gly Ile Phe Phe Phe Ile Ile Val Ser Leu Ile
          180          185          190

Thr Cys Phe Leu Leu Ile Val Phe Leu Trp Arg His Val Arg Gln Met
          195          200          205

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His Ser Asp Val Ser Gly Phe Arg Asp His Ser Thr Lys Val His Val
 210 215 220
 Lys Ala Met Lys Phe Leu Ile Ser Phe Met Val Phe Phe Ile Leu His
 225 230 235 240
 Phe Val Gly Leu Ser Ile Glu Val Leu Cys Phe Ile Leu Pro Gln Asn
 245 250 255
 Lys Leu Leu Phe Ile Thr Gly Leu Thr Ala Thr Cys Leu Tyr Pro Cys
 260 265 270
 Gly His Ser Ile Ile Val Ile Leu Gly Asn Lys Gln Leu Lys Gln Ala
 275 280 285
 Ser Leu Lys Ala Leu Gln Gln Leu Lys Cys Cys Glu Thr Lys Gly Asn
 290 295 300
 Phe Arg Val Lys
 305

<210> 118

<211> 1754

<212> DNA

<213> Mus musculus

<400> 118

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tctccatcaa gaagccagta tatgggacat tctccagcag ataatttaca atagatgcag	360
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tttcttatta accaaagtgt gaccaatctg ggaatctttt tcttcattat tgtatccctg    960
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gtttcaggat tcagagacca cagcacaaaa gtacatgtga aagctatgaa atttctaata    1080
tcttttatgg tcttctttat tctgcatttt gtaggccttt ccatagaagt gctatgcttt    1140
attctgccac aaaataaact gctctttata actgggttga cagccacatg cctctatccc    1200
tgcggtcact caatcatcgt aatttttagga aataagcagt taaagcaagc ctctttgaag    1260
gcactgcagc aactaaaatg ctgtgagaca aaaggaaatt tcagagtcaa ataaatgggt    1320
ttgcaaataa atagctgcct tgttcttcca ctgggtttta ccctgttagt tgatgttatg    1380
aaaagttcct gctatgggtg atgacatctc aaggaatcta tttttctggg ggcatgttaa    1440
gtccacgtga agcctcactt catactgtga cttgactatg caaattcttt ccacaaaata    1500
accagataac attcagcctg gagataaatt catttaaagg cttttatggg gaggataaac    1560
aaaaaaaaaa aatcattttt ctgtgattca ctgtaactcc caggatgagt aaaagaaaac    1620
aagacaaatg gttgtgatca gcctttgtgt gtctagacag agctagggac cagatgttga    1680
tgcttgtgtg tggttttgag ttctttaaga agttattgcc tctctgccat tcggtattcc    1740
tcaggtgaga attc                                                    1754

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<210> 119

<211> 297

<212> PRT

<213> Mus musculus

<400> 119

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Met Leu Trp Glu Leu Tyr Val Phe Val Phe Ala Ala Ser Val Phe Leu
1           5           10          15

Asn Phe Val Gly Ile Ile Ala Asn Leu Phe Ile Ile Val Ile Ile Ile
20          25          30

Lys Thr Trp Val Asn Ser Arg Arg Ile Ala Ser Pro Asp Arg Ile Leu
35          40          45

Phe Ser Leu Ala Ile Thr Arg Phe Leu Thr Leu Gly Leu Phe Leu Leu
50          55          60

Asn Ser Val Tyr Ile Ala Thr Asn Thr Gly Arg Ser Val Tyr Phe Ser
65          70          75          80

Thr Phe Phe Leu Leu Cys Trp Lys Phe Leu Asp Ala Asn Ser Leu Trp
85          90          95

Leu Val Thr Ile Leu Asn Ser Leu Tyr Cys Val Lys Ile Thr Asn Phe
100         105         110

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Gln His Pro Val Phe Leu Leu Leu Lys Arg Thr Ile Ser Met Lys Thr
 115 120 125
 Thr Ser Leu Leu Leu Ala Cys Leu Leu Ile Ser Ala Leu Thr Thr Leu
 130 135 140
 Leu Tyr Tyr Met Leu Ser Gln Ile Ser Arg Phe Pro Glu His Ile Ile
 145 150 155 160
 Gly Arg Asn Asp Thr Ser Phe Asp Leu Ser Asp Gly Ile Leu Thr Leu
 165 170 175
 Val Ala Ser Leu Val Leu Asn Ser Leu Leu Gln Phe Met Leu Asn Val
 180 185 190
 Thr Phe Ala Ser Leu Leu Ile His Ser Leu Arg Arg His Ile Gln Lys
 195 200 205
 Met Gln Arg Asn Arg Thr Ser Phe Trp Asn Pro Gln Thr Glu Ala His
 210 215 220
 Met Gly Ala Met Arg Leu Met Ile Cys Phe Leu Val Leu Tyr Ile Pro
 225 230 235 240
 Tyr Ser Ile Ala Thr Leu Leu Tyr Leu Pro Ser Tyr Met Arg Lys Asn
 245 250 255
 Leu Arg Ala Gln Ala Ile Cys Met Ile Ile Thr Ala Ala Tyr Pro Pro
 260 265 270
 Gly His Ser Val Leu Leu Ile Ile Thr His His Lys Leu Lys Ala Lys
 275 280 285
 Ala Lys Lys Ile Phe Cys Phe Tyr Lys
 290 295

<210> 120

<211> 1475

<212> DNA

<213> Mus musculus

<400> 120

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aagcttggtt gtaattaggc attcctaaga aaataagaac aggagtgaag aaatagtaat      60
ttaatccttg aaagatttgc atctcagtaa aagcagctgc ctcttagacc agaaatggtg      120
tttgccatgc tggaaaataa aaaggagacc tctttccagg ctgcatcctg tgtctgctta      180
cttattttcag tttgttttca tcggcaccaa acgaggaaag atgctctggg aactgtatgt      240
atgtgtgttt gctgcctcgg tttttttaaa ttttgtagga atcattgcaa atctatttat      300
tatagtgata attattaaga cttgggtcaa cagtcgcaga attgcctctc cggataggat      360
cctgttcagc ttggccatca ctagattcct gactttgggg ttgtttctac tgaacagtgt      420
ctacattgct acaaatactg gaaggtcagt ctacttttcc acattttttc tattgtgttg      480

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gaagtttctg gatgcaaaca gtctctgggt agtgaccatt ctgaacagct tgtattgtgt 540
gaagattact aattttcaac acccagtgtt tctcctgttg aaacggacta tctctatgaa 600
gaccaccagc ctgctgttgg cctgtcttct gatttcagcc ctcaccactc tcctatatta 660
tatgctctca cagatatcac gttttcctga acacataatt gggagaaatg acacgtcatt 720
tgacctcagt gatggtatct tgacgttagt agcctctttg gtcttgaact cacttctaca 780
gtttatgctc aatgtgactt ttgcttcctt gttaatacat tccttgagaa gacatataca 840
gaagatgcag agaaacagga ccagcttttg gaatccccag acggaggctc acatgggtgc 900
tatgaggctg atgatctgtt tcctcgtgct ctacattcca tattcaattg ctaccctgct 960
ctatcttcct tcctatatga ggaagaatct gagagcccag gccatttgca tgattattac 1020
tgctgcttac cctccaggac attctgtcct cctcattatc acacatcata aactgaaagc 1080
taaagcaaag aagattttct gtttctacaa gtagcagaat ttcattagta gttaacagca 1140
tcaattcatg gtttggttgc attagaaatg tctcagtgat ctaaggactt aattttgtga 1200
tcttgtatct ggcacctga ccctgagact aagtgttat attttggcca atacagcatc 1260
ttttggctaa tatttttaaag taaatcacat tccataagaa attgtttaag ggatttacgt 1320
atttttcatg gctatcacat tcctagacaa tggaaatcac catactgttt cgctagctac 1380
tgaagtacca ggggaaagtc catgaatgaa ggccacattg tgatgttctt ggtagcaca 1440
gattagagaa tttggcctca actgagcaag atatc 1475

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<210> 121

<211> 316

<212> PRT

<213> Mus musculus

<400> 121

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Met Glu His Leu Leu Lys Arg Thr Phe Asp Ile Thr Glu Asn Ile Leu
1           5           10           15

Leu Ile Ile Leu Phe Ile Glu Leu Ile Ile Gly Leu Ile Gly Asn Gly
20           25           30

Phe Thr Ala Leu Val His Cys Met Asp Trp Val Lys Arg Lys Lys Met
35           40           45

Ser Leu Val Asn Lys Ile Leu Thr Ala Leu Ala Thr Ser Arg Ile Phe
50           55           60

Leu Leu Trp Phe Met Leu Val Gly Phe Pro Ile Ser Ser Leu Tyr Pro
65           70           75           80

```

Tyr Leu Val Thr Thr Arg Leu Met Ile Gln Phe Thr Ser Thr Leu Trp
 85 90 95
 Thr Ile Ala Asn His Ile Ser Val Trp Phe Ala Thr Cys Leu Ser Val
 100 105 110
 Phe Tyr Phe Leu Lys Ile Ala Asn Phe Ser Asn Ser Pro Phe Leu Tyr
 115 120 125
 Leu Lys Arg Arg Val Glu Lys Val Val Ser Val Thr Leu Leu Val Ser
 130 135 140
 Leu Val Leu Leu Phe Leu Asn Ile Leu Leu Leu Asn Leu Glu Ile Asn
 145 150 155 160
 Met Cys Ile Asn Glu Tyr His Gln Ile Asn Ile Ser Tyr Ile Phe Ile
 165 170 175
 Ser Tyr Tyr His Leu Ser Cys Gln Ile Gln Val Leu Gly Ser His Ile
 180 185 190
 Ile Phe Leu Ser Val Pro Val Val Leu Ser Leu Ser Thr Phe Leu Leu
 195 200 205
 Leu Ile Phe Ser Leu Trp Thr Leu His Lys Arg Met Gln Gln His Val
 210 215 220
 Gln Gly Gly Arg Asp Ala Arg Thr Thr Ala His Phe Lys Ala Leu Gln
 225 230 235 240
 Ala Val Ile Ala Phe Leu Leu Leu Tyr Ser Ile Phe Ile Leu Ser Leu
 245 250 255
 Leu Leu Gln Phe Trp Ile His Gly Leu Arg Lys Lys Pro Pro Phe Ile
 260 265 270
 Ala Phe Cys Gln Val Val Asp Thr Ala Phe Pro Ser Phe His Ser Tyr
 275 280 285
 Val Leu Ile Leu Arg Asp Arg Lys Leu Arg His Ala Ser Leu Ser Val
 290 295 300
 Leu Ser Trp Leu Lys Cys Arg Pro Asn Tyr Val Lys
 305 310 315

<210> 122

<211> 1339

<212> DNA

<213> Mus musculus

<400> 122

gaattcagaa atcatcaaaa aatcttcaaa actacatgtt taaaatagca cttcaaata 60

atacatttgc aaatctttac aactaataca taaaatggag catcttttga agagaacatt 120

tgatatcacc gagaacatac ttctaattat tttattcatt gaattaataa ttggacttat 180

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aggaaacgga ttcacagcct tgggtgactg catggactgg gttaagagaa aaaaaatgtc 240
attagttaat aaaatcctca ccgctttggc aacttctaga attttcctgc tctgggtcat 300
gctagtaggt tttccaatta gctcactgta cccatattta gttactacta gactgatgat 360
acagttcact agtactctat ggactatagc taaccatatt agtgtctggg ttgctacatg 420
cctcagtgtc ttttattttc tcaagatagc caatttttct aattctcctt ttctctatct 480
aaagaggaga gttgaaaaag tagtttcagt tacattactg gtgtctctgg tcctcttggt 540
tttaaataatt ttactactta atttggaat taacatgtgt ataaatgaat atcatcaaat 600
aaacatatca tacatcttca tttcttatta ccatttaagt tgtcaaattc aggtgttagg 660
aagtcacatt attttcctgt ctgtcccggt tgttttgctc ctgtcaaact ttctcctgct 720
catcttctcc ctgtggacac ttcacaagag gatgcagcag catgttcagg gaggcagaga 780
tgccagaacc acggcccact tcaaagcctt gcaagcagtg attgcctttc tcctactata 840
ctccattttt atcctgtcac tgttactaca attttggatc catggattaa ggaagaaacc 900
tcctttcatt gcattttgtc aggttgtaga tacagctttt ccttcattcc attcatatgt 960
cttgattctg agagacagga agctgagaca cgctctctc tctgtgttgt cgtggctgaa 1020
atgcaggcca aattatgtga aataatattt ctttgatttt tcattttcaa ttttaaaata 1080
ttcttagaat ttgactgcat gtatttcac ttttatttga aacaaccact aattaaagct 1140
attactaatt tagcaagtcg tatacaaggt tattttttta tacacatatc aaaaactgac 1200
atgtttatgt tctacaaaaa cctgaatata tcaaaattat ataaattttg tatcaacgat 1260
taacaatgga gtttttttat ttatgacctg tcacgggact ccggtggagt cagcttgta 1320
gatgaaagtc tgaaagctt 1339

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<210> 123

<211> 333

<212> PRT

<213> Mus musculus

<400> 123

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Met Phe Ser Gln Ile Ile Ser Thr Ser Asp Ile Phe Thr Phe Thr Ile
1           5           10           15

```

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Ile Leu Phe Val Glu Leu Val Ile Gly Ile Leu Gly Asn Gly Phe Ile
          20           25           30

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Ala Leu Val Asn Ile Met Asp Trp Thr Lys Arg Arg Ser Ile Ser Ser
          35           40           45

```

```

Ala Asp Gln Ile Leu Thr Ala Leu Ala Ile Thr Arg Phe Leu Tyr Val
          50           55           60

```

Trp	Phe	Met	Ile	Ile	Cys	Ile	Leu	Leu	Phe	Met	Leu	Cys	Pro	His	Leu	65	70	75	80
Leu	Thr	Arg	Ser	Glu	Ile	Val	Thr	Ser	Ile	Gly	Ile	Ile	Trp	Ile	Val	85	90	95	
Asn	Asn	His	Phe	Ser	Val	Trp	Leu	Ala	Thr	Cys	Leu	Gly	Val	Phe	Tyr	100	105	110	
Phe	Leu	Lys	Ile	Ala	Asn	Phe	Ser	Asn	Ser	Leu	Phe	Leu	Tyr	Leu	Lys	115	120	125	
Trp	Arg	Val	Lys	Lys	Val	Val	Leu	Met	Ile	Ile	Gln	Val	Ser	Met	Ile	130	135	140	
Phe	Leu	Ile	Leu	Asn	Leu	Leu	Ser	Leu	Ser	Met	Tyr	Asp	Gln	Phe	Ser	145	150	155	160
Ile	Asp	Val	Tyr	Glu	Gly	Asn	Thr	Ser	Tyr	Asn	Leu	Gly	Asp	Ser	Thr	165	170	175	
Pro	Phe	Pro	Thr	Ile	Ser	Leu	Phe	Ile	Asn	Ser	Ser	Lys	Val	Phe	Val	180	185	190	
Ile	Thr	Asn	Ser	Ser	His	Ile	Phe	Leu	Pro	Ile	Asn	Ser	Leu	Phe	Met	195	200	205	
Leu	Ile	Pro	Phe	Thr	Val	Ser	Leu	Val	Ala	Phe	Leu	Met	Leu	Ile	Phe	210	215	220	
Ser	Leu	Trp	Lys	His	His	Lys	Lys	Met	Gln	Val	Asn	Ala	Lys	Pro	Pro	225	230	235	240
Arg	Asp	Ala	Ser	Thr	Met	Ala	His	Ile	Lys	Ala	Leu	Gln	Thr	Gly	Phe	245	250	255	
Ser	Phe	Leu	Leu	Leu	Tyr	Ala	Val	Tyr	Leu	Leu	Phe	Ile	Val	Ile	Gly	260	265	270	
Met	Leu	Ser	Leu	Arg	Leu	Ile	Gly	Gly	Lys	Leu	Ile	Leu	Leu	Phe	Asp	275	280	285	
His	Ile	Ser	Gly	Ile	Gly	Phe	Pro	Ile	Ser	His	Ser	Phe	Val	Leu	Ile	290	295	300	
Leu	Gly	Asn	Asn	Lys	Leu	Arg	Gln	Ala	Ser	Leu	Ser	Val	Leu	His	Cys	305	310	315	320
Leu	Arg	Cys	Arg	Ser	Lys	Asp	Met	Asp	Thr	Met	Gly	Pro				325	330		

<210> 124

<211> 1371

<212> DNA

<213> Mus musculus

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<400> 124
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ctgggattgt ttatatttgt tacaacaaaa tttatatgtt tgtagtcag taatgtataa      180
gtgggatttt aaagcatgat tatcttgaat ttttaacaaa aaacatgtag tgctttttaa      240
atgtagcaga aacattaata attgaagcat gttctcacag ataataagca ccagtgatat      300
ttttactttt acaataatat tatttgtgga attagtaata ggaatttttag gaaatggatt      360
catagcacta gtgaatatca tggactggac caagagaaga agcatttcat cagcggatca      420
gattctcact gctttggcca ttaccagatt tctctatgtg tggtttatga tcatttgtat      480
attgttattc atgctgtgcc cacatttgct tacaagaaca gaaatagtaa catcaattgg      540
tattatttgg atagtgaata accatttcag cgtttggctt gccacatgcc tcggtgtctt      600
ttattttctg aagatagcca atttttctaa ctctttgttt ctttacctaa agtggagagt      660
taaaaaagta gttttaatga taatacaggt atcaatgatt ttcttgattt taaacctgtt      720
atctctaagc atgtatgata agttctcaat tgatgtttat gaaggaaata catcttataa      780
tttaggggat tcaaccccat ttcccacaat ttcttattc atcaattcat caaaagtttt      840
cgtaatcacc aactcatccc atattttctt acccatcaac tccctgttca tgctcatacc      900
cttcacagtg tccctggtag cttttctcat gtcattctt tcaactgtga agcatcacia      960
aaagatgcag gtcaatgcca aaccacctag agatgccagc accatggccc acattaaagc     1020
cttgcaaaca gggttctcct tctgtctgct gtatgcagta tacttacttt ttattgtcat     1080
aggaatgttg agccttaggt tgataggagg aaaattaata cttttatttg accacatttc     1140
tggaataggt tttcctataa gccactcatt tgtgctgatt ctgggaaata acaagctgag     1200
acaagccagt ctttcagtgt tgcattgtct gaggtgccga tccaaagata tggacaccat     1260
gggtccataa aaaatttcag aggtcattgg gaaacatttt gagatcttat aggggaaaaa     1320
gaaaatgtgg ggcttcaaag ctggtaggag taatatagag aaggatagga g               1371

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<210> 125

<211> 303

<212> PRT

<213> Mus musculus

<220>

<221> MOD_RES

<222> (169)..(169)

<223> Variable amino acid

<400> 125

Met	Glu	His	Pro	Leu	Arg	Arg	Thr	Phe	Asp	Phe	Ser	Gln	Ser	Ile	Leu
1				5					10					15	
Leu	Thr	Ile	Leu	Phe	Ile	Glu	Leu	Ile	Ile	Gly	Leu	Ile	Arg	Asn	Gly
			20					25					30		
Leu	Met	Val	Leu	Val	His	Cys	Ile	Asp	Trp	Val	Lys	Arg	Lys	Lys	Phe
		35					40					45			
His	Leu	Leu	Ile	Lys	Ser	Ser	Pro	Leu	Trp	Gln	Thr	Ser	Arg	Ile	Cys
	50					55					60				
Leu	Leu	Trp	Phe	Met	Leu	Ile	His	Leu	Leu	Ile	Thr	Leu	Leu	Tyr	Ala
65					70					75					80
Asp	Leu	Ala	Ser	Thr	Arg	Thr	Met	Met	Gln	Phe	Ala	Ser	Asn	Pro	Trp
				85					90					95	
Thr	Ile	Ser	Asn	His	Ile	Ser	Ile	Trp	Leu	Ala	Thr	Cys	Leu	Gly	Val
			100					105					110		
Phe	Tyr	Phe	Leu	Lys	Ile	Ala	Asn	Phe	Ser	Asn	Ser	Thr	Phe	Leu	Tyr
		115					120					125			
Leu	Lys	Trp	Arg	Val	Gln	Phe	Leu	Leu	Leu	Asn	Ile	Leu	Leu	Val	Lys
	130					135					140				
Phe	Glu	Ile	Asn	Met	Trp	Ile	Asn	Glu	Tyr	His	Gln	Ile	Asn	Ile	Pro
145					150					155					160
Tyr	Ser	Phe	Ile	Ser	Tyr	Tyr	Gln	Xaa	Cys	Gln	Ile	Gln	Val	Leu	Ser
				165					170					175	
Leu	His	Ile	Ile	Phe	Leu	Ser	Val	Pro	Phe	Ile	Leu	Ser	Leu	Ser	Thr
			180					185					190		
Phe	Leu	Leu	Leu	Ile	Phe	Ser	Leu	Trp	Thr	Leu	His	Gln	Arg	Met	Gln
		195					200					205			
Gln	His	Val	Gln	Gly	Tyr	Arg	Asp	Ala	Ser	Thr	Met	Ala	His	Phe	Lys
	210					215					220				
Ala	Leu	Gln	Ala	Val	Ile	Ala	Phe	Leu	Leu	Ile	His	Ser	Ile	Phe	Ile
225					230					235					240
Leu	Ser	Leu	Leu	Leu	Gln	Leu	Trp	Lys	His	Glu	Leu	Arg	Lys	Lys	Pro
				245					250					255	
Pro	Phe	Val	Val	Phe	Cys	Gln	Val	Ala	Tyr	Ile	Ala	Phe	Pro	Ser	Ser
			260					265					270		
His	Ser	Tyr	Val	Phe	Ile	Leu	Gly	Asp	Arg	Lys	Leu	Arg	Gln	Ala	Cys
		275					280					285			
Leu	Ser	Val	Leu	Trp	Arg	Leu	Lys	Cys	Arg	Pro	Asn	Tyr	Val	Gly	
		290				295					300				

<210> 126
 <211> 1108
 <212> DNA
 <213> Mus musculus

<400> 126
 aataatgtat gtggaagagt taagtataaa tgttgtatga gaatgaactc agaaatcatc 60
 aaaaatcttt aaaactgcat gttaaaaatc acacttcaaa tgaatatatt tgtaattctt 120
 tagaactaat aaataaaatg gagcatcctt tgaggagaac atttgatttc tcccagagca 180
 tacttctaac cattttatct attgaattaa taattggact tataagaaat ggattaatgg 240
 tattggtgca ctgcatagat tgggttaaga gaaaaaaatt tcatttgta atcaaatacct 300
 caccactttg gcaaacttcc agaatttgct tgctctggtt catgctaata catctcctga 360
 ttactttatt gtatgcagat ttagctagta ctagaacgat gatgcaattc gctagcaatc 420
 catggactat atctaaccat atcagcatct ggcttgctac atgccttggg gtcttttatt 480
 ttctcaagat agccaatttt tctaactcta cttttctcta tctaaaatgg cgagttcagt 540
 tcctcttggt aaatatTTTA ctggttaaatt ttgagattaa catgtggata aatgaatata 600
 atcaaataaa cataccatac agcttcattt cttattacca aattgtcaaa tacagggtgtt 660
 aagtcttcac attattttcc tgtctgtccc ctttattttg tccctgtcaa cttttctcct 720
 gctcatcttc tccctgtgga cacttcacca gaggatgcag cagcatgttc aaggatacag 780
 agatgccagc acaatggccc acttcaaagc cttgcaagca gtgattgcct ttctcttaat 840
 acactccatt tttatcctgt cactgttact acaactttgg aaacatgaat taaggaagaa 900
 acctcctttt gttgtatttt gtcagggtgc atatatagct tttccttcat ccattcata 960
 tgtcttcatt ctgggagaca gaaagctgag acaggcttgt ctctctgtgt tgtggaggct 1020
 gaaatgcagg ccaaattatg tgggataaaa tctctttgtg ctttcatttc caattcttaa 1080
 atattctttg attttgactg cataaatt 1108

<210> 127
 <211> 150
 <212> PRT
 <213> Mus musculus

<400> 127
 Gly Ala Ile Val Asn Val Asp Phe Leu Ile Gly Asn Val Gly Asn Gly
 1 5 10 15
 Phe Ile Val Val Ala Asn Ile Met Asp Leu Val Lys Arg Arg Lys Leu
 20 25 30

Ser Ser Val Asp Gln Leu Leu Thr Ala Leu Ala Val Ser Arg Ile Thr
 35 40 45
 Leu Leu Trp Tyr Leu Tyr Ile Met Lys Arg Thr Phe Leu Val Asp Pro
 50 55 60
 Asn Ile Gly Ala Ile Met Gln Ser Thr Arg Leu Thr Asn Val Ile Trp
 65 70 75 80
 Ile Ile Ser Asn His Phe Ser Ile Trp Leu Ala Thr Thr Leu Ser Ile
 85 90 95
 Phe Tyr Phe Leu Lys Ile Ala Asn Phe Ser Asn Ser Ile Phe Cys Tyr
 100 105 110
 Leu Arg Trp Arg Phe Glu Lys Val Ile Leu Met Ala Leu Leu Val Ser
 115 120 125
 Leu Val Leu Leu Phe Ile Asp Ile Leu Val Thr Asn Met Tyr Ile Asn
 130 135 140
 Ile Trp Thr Asp Glu Phe
 145 150

<210> 128
 <211> 520
 <212> DNA
 <213> Mus musculus

<400> 128
 ttttcagcag tgactttggg aagcagaacg tcctcttaga gacagtgggt gctgctatcc 60
 tagttaatgt ggagcaatag ttaatgtgga tttcctaatt ggaaatgttg ggaatggatt 120
 cattgttggt gcaaacataa tggacttggt caagagaaga aagctttctt cagtggatca 180
 gctgctcact gcaactggccg tctccagaat cactttgctg tggtaacctgt acataatgaa 240
 acgaacatth ttagtggatc caaacattgg tgcaattatg caatcaacaa gactgactaa 300
 tgttatctgg ataatttcta accatttttag tatatggctg gccaccaccc tcagcatctt 360
 ttattttctc aagatagcaa atttttctaa ctctattttc tgttacctga ggtggagatt 420
 tgaaaagggtg attttgatgg cattgctggg gtccctgggc ctcttggtta tagatatattt 480
 agtaacaaac atgtacatta atatttggac tgatgaattc 520

<210> 129
 <211> 309
 <212> PRT
 <213> Mus musculus

<400> 129
 Met Val Ala Val Leu Gln Ser Thr Leu Pro Ile Ile Phe Ser Met Glu
 1 5 10 15

Phe Ile Met Gly Thr Leu Gly Asn Gly Phe Ile Phe Leu Ile Val Cys
 20 25 30
 Ile Asp Trp Val Gln Arg Arg Lys Ile Ser Leu Val Asp Gln Ile Arg
 35 40 45
 Thr Ala Leu Ala Ile Ser Arg Ile Ala Leu Ile Trp Leu Ile Phe Leu
 50 55 60
 Asp Trp Trp Val Ser Val His Tyr Pro Ala Leu His Glu Thr Gly Lys
 65 70 75 80
 Met Leu Ser Thr Tyr Leu Ile Ser Trp Thr Val Ile Asn His Cys Asn
 85 90 95
 Phe Trp Leu Thr Ala Asn Leu Ser Ile Leu Tyr Phe Leu Lys Ile Ala
 100 105 110
 Asn Phe Ser Asn Ile Ile Phe Leu Tyr Leu Lys Phe Arg Ser Lys Asn
 115 120 125
 Val Val Leu Val Thr Leu Leu Val Ser Leu Phe Phe Leu Phe Leu Asn
 130 135 140
 Thr Val Ile Ile Lys Ile Phe Ser Asp Val Cys Phe Asp Ser Val Gln
 145 150 155 160
 Arg Asn Val Ser Gln Ile Phe Ile Met Tyr Asn His Glu Gln Ile Cys
 165 170 175
 Lys Phe Leu Ser Phe Thr Asn Pro Met Phe Thr Phe Ile Pro Phe Val
 180 185 190
 Met Ser Thr Val Met Phe Ser Leu Leu Ile Phe Ser Leu Trp Arg His
 195 200 205
 Leu Lys Asn Met Gln His Thr Ala Lys Gly Cys Arg Asp Ile Ser Thr
 210 215 220
 Thr Val His Ile Arg Ala Leu Gln Thr Ile Ile Val Ser Val Val Leu
 225 230 235 240
 Tyr Thr Ile Phe Phe Leu Ser Phe Phe Val Lys Val Trp Ser Phe Val
 245 250 255
 Ser Pro Glu Arg Tyr Leu Ile Phe Leu Phe Val Trp Ala Leu Gly Asn
 260 265 270
 Ala Val Phe Ser Ala His Pro Phe Val Met Ile Leu Val Asn Arg Arg
 275 280 285
 Leu Arg Leu Ala Ser Leu Ser Leu Ile Phe Trp Leu Trp Tyr Arg Phe
 290 295 300
 Lys Asn Ile Glu Val
 305

<210> 130
 <211> 1199
 <212> DNA
 <213> Mus musculus

<400> 130
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 ttacactcat attttgaagg aacaatatgt tttaaaggaa tatattaaca aatcttcagc 180
 agttacctca gaagtttggg tattgtttta cagaaaatgg tggcagttct acagagcaca 240
 cttccaataa ttttcagtat ggaattcata atgggaacct taggaaatgg attcattttt 300
 ctgatagtct gcatagactg ggtccaaaga agaaaaatct ctttagtgga tcaaataccg 360
 actgctctgg caattagcag aatcgctcta atttggttga tattcctaga ttggtgggtg 420
 tctgttcatt acccagcatt acatgaaact ggtaagatgt tatcaacata tttgatttcc 480
 tggacggtga tcaatcattg taacttttgg cttactgcaa acttgagcat cctttatttt 540
 ctcaagatag ccaacttttc taacattatt tttctttatc taaagtttag atctaaaaat 600
 gtggtattag tgaccctggt agtgtctcta ttttcttgt tcttaaatac tgtaattata 660
 aaaatatatt ctgatgtgtg ttttgatagt gttcaaagaa atgtgtctca aattttcata 720
 atgtataacc atgaacaaat ttgtaaattt ctttccttta ctaaccctat gttcacattc 780
 ataccttttg ttatgtccac ggtaatgttt tctttgctca tcttctccct gtggagacat 840
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 agagccctgc aaaccatcat tgtgtctgta gtgctataca ctattttttt tctatcattt 960
 tttgttaaag tttggagttt tgtgtcacca gagagatacc tgatcttttt gtttgtctgg 1020
 gctctgggaa atgctgtttt ttctgctcac ccatttgtca tgatttttgg aaacagaaga 1080
 ttgagattgg cttctctctc tctgattttt tggctctggt acaggtttaa aaatatagaa 1140
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<210> 131
 <211> 309
 <212> PRT
 <213> Mus musculus

<400> 131
 Met Leu Ser Thr Met Glu Gly Val Leu Leu Ser Val Ser Thr Ser Glu
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Ala	Val	Leu	Gly	Ile	Val	Gly	Asn	Thr	Phe	Ile	Ala	Leu	Val	Asn	Cys
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Met	Asp	Tyr	Asn	Arg	Asn	Lys	Lys	Leu	Ser	Asn	Ile	Gly	Phe	Ile	Leu
		35				40						45			
Thr	Gly	Leu	Ala	Ile	Ser	Arg	Ile	Cys	Leu	Val	Leu	Ile	Leu	Ile	Thr
		50				55				60					
Glu	Ala	Tyr	Ile	Lys	Ile	Phe	Tyr	Pro	Gln	Leu	Leu	Ser	Pro	Val	Asn
65				70						75				80	
Ile	Ile	Glu	Leu	Ile	Ser	Tyr	Leu	Trp	Ile	Ile	Ile	Cys	Gln	Leu	Asn
				85				90						95	
Val	Trp	Phe	Ala	Thr	Ser	Leu	Ser	Ile	Phe	Tyr	Phe	Leu	Lys	Ile	Ala
		100						105				110			
Asn	Phe	Ser	His	Tyr	Ile	Phe	Val	Trp	Leu	Lys	Arg	Arg	Ile	Asp	Leu
		115				120						125			
Val	Phe	Phe	Phe	Leu	Ile	Gly	Cys	Leu	Leu	Ile	Ser	Trp	Leu	Phe	Ser
130						135				140					
Phe	Pro	Val	Val	Ala	Lys	Met	Val	Lys	Asp	Asn	Lys	Met	Leu	Tyr	Ile
145				150						155				160	
Asn	Thr	Ser	Trp	Gln	Ile	His	Met	Lys	Lys	Ser	Glu	Leu	Ile	Ile	Asn
				165				170						175	
Tyr	Val	Phe	Thr	Asn	Gly	Gly	Val	Phe	Leu	Phe	Phe	Met	Ile	Met	Leu
		180						185				190			
Ile	Val	Cys	Phe	Leu	Leu	Ile	Ile	Ser	Leu	Trp	Arg	His	Arg	Arg	Gln
		195				200						205			
Met	Glu	Ser	Asn	Lys	Leu	Gly	Phe	Arg	Asp	Leu	Asn	Thr	Glu	Val	His
210						215				220					
Val	Arg	Thr	Ile	Lys	Val	Leu	Leu	Ser	Phe	Ile	Ile	Leu	Phe	Ile	Leu
225				230						235				240	
His	Phe	Met	Gly	Ile	Thr	Ile	Asn	Val	Ile	Cys	Leu	Leu	Ile	Pro	Glu
				245				250						255	
Ser	Asn	Leu	Leu	Phe	Met	Phe	Gly	Leu	Thr	Thr	Ala	Phe	Ile	Tyr	Pro
		260						265				270			
Gly	Cys	His	Ser	Leu	Ile	Leu	Ile	Leu	Ala	Asn	Ser	Arg	Leu	Lys	Gln
		275				280						285			
Cys	Ser	Val	Met	Ile	Leu	Gln	Leu	Leu	Lys	Cys	Cys	Glu	Asn	Gly	Lys
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Glu	Leu	Arg	Asp	Thr											
305															

<210> 132
 <211> 1535
 <212> DNA
 <213> Mus musculus

<400> 132
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 caagtaaaac atacaaaaca aatactttaa tttgcctatt aacaaatggc aagaaaagat 240
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 aagtaaagcc actcttttat tgaacagcaa tagattggaa tcttaacaa ctgcaacaga 420
 agccatttta aagatcaaca aagatgctga gcacaatgga aggtgtcctc ctttcagttt 480
 caactagtga ggctgtgctg ggcatgttag ggaacacatt cattgcactt gtaaactgta 540
 tggactataa caggaacaag aagctctcta atattggctt tattctcact ggcttggcaa 600
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 cacagttgct gtctcctgtc aacataattg agctcatcag ttatctatgg ataattatct 720
 gtcaattgaa tgtctgggtt gccactagtc tcagtatttt ttatttcctg aagatagcaa 780
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 taatcattaa ctatgttttc accaatgggg gagtattttt attttttatg ataatgttaa 1020
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 taatcccaga aagcaacttg ttattcatgt ttggtttgac aactgcattc atctatcccg 1260
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 tactgcaact attaaagtgc tgtgagaatg gtaaagaact cagagacaca tgacagtctg 1380
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 ttcagagtct tctgcctctc aaggaatcac actcc 1535

<210> 133
 <211> 310
 <212> PRT
 <213> Mus musculus

<400> 133

Met	Cys	Ala	Val	Leu	Arg	Ser	Ile	Leu	Thr	Ile	Ile	Phe	Ile	Leu	Glu
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Phe	Phe	Ile	Gly	Asn	Leu	Gly	Asn	Gly	Phe	Ile	Ala	Leu	Val	Gln	Cys
			20					25					30		
Met	Asp	Leu	Arg	Lys	Arg	Arg	Thr	Phe	Pro	Ser	Ala	Asp	His	Phe	Leu
	35						40					45			
Thr	Ala	Leu	Ala	Ile	Ser	Arg	Leu	Ala	Leu	Ile	Trp	Val	Leu	Phe	Leu
	50					55					60				
Asp	Ser	Phe	Leu	Phe	Ile	Gln	Ser	Pro	Leu	Leu	Met	Thr	Arg	Asn	Thr
65					70					75					80
Leu	Arg	Leu	Ile	Gln	Thr	Ala	Trp	Asn	Ile	Ser	Asn	His	Phe	Ser	Ile
				85					90					95	
Trp	Phe	Ala	Thr	Ser	Leu	Ser	Ile	Phe	Tyr	Leu	Phe	Lys	Ile	Ala	Ile
			100					105					110		
Phe	Ser	Asn	Tyr	Leu	Phe	Phe	Tyr	Leu	Lys	Arg	Arg	Val	Lys	Arg	Val
		115					120					125			
Val	Leu	Val	Ile	Leu	Leu	Leu	Ser	Met	Ile	Leu	Leu	Phe	Phe	Asn	Ile
	130					135					140				
Phe	Leu	Glu	Ile	Lys	His	Ile	Asp	Val	Trp	Ile	Tyr	Gly	Thr	Lys	Arg
145					150					155					160
Asn	Ile	Thr	Asn	Gly	Leu	Ser	Ser	Asn	Ser	Phe	Ser	Glu	Phe	Ser	Arg
				165					170					175	
Leu	Ile	Leu	Ile	Pro	Ser	Leu	Met	Phe	Thr	Leu	Val	Pro	Phe	Gly	Val
			180					185					190		
Ser	Leu	Ile	Ala	Phe	Leu	Leu	Leu	Ile	Phe	Ser	Leu	Met	Lys	His	Val
	195						200					205			
Arg	Lys	Met	Gln	Tyr	Tyr	Thr	Lys	Gly	Cys	Lys	Asp	Val	Arg	Thr	Met
	210					215					220				
Ala	His	Thr	Thr	Ala	Leu	Gln	Thr	Val	Val	Ala	Phe	Leu	Leu	Leu	Tyr
225					230					235					240
Thr	Thr	Phe	Phe	Leu	Ser	Leu	Val	Val	Glu	Val	Ser	Thr	Leu	Glu	Met
				245					250					255	
Asp	Glu	Ser	Leu	Met	Leu	Leu	Phe	Ala	Lys	Val	Thr	Ile	Met	Ile	Phe
			260					265					270		

Pro Ser Ile His Ser Cys Ile Phe Ile Leu Lys His Asn Lys Leu Arg
 275 280 285

Gln Asp Leu Leu Ser Val Leu Lys Trp Leu Gln Tyr Trp Cys Lys Arg
 290 295 300

Glu Lys Thr Leu Asp Ser
 305 310

<210> 134
 <211> 1482
 <212> DNA
 <213> Mus musculus

<400> 134
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 caagtttacc tgcacagaca agggaagaag tggcaaatg tgcaaatgag agcaacttta 180
 tttgactgtc agtacgttga aattcagtggt ttccttaatc agttatggat tgacatttat 240
 gtgcacagaa cctggaagaa tttcagccaa gctggaggta aaaatccaaa attctgatga 300
 taaaaccaa agtaaatac aggtaaatct tctttatttt tcttttttaa tactgtatat 360
 ggacattttt taatacagca tttttttttt ttgaaattta gaaaaaaacc actaagaaat 420
 attcaccaat ggaatagact ttaaagtcac ttagagaatg tgtgctgttc tacgtagcat 480
 actgacaatc attttcattt tggagttctt cattggaaat ctggggaatg gattcatagc 540
 tctggtacaa tgcattggact tacgaaagag aagaacgttc ccttcagcag atcatttcct 600
 cactgctctg gccatctcca ggcttgctct gatatgggtt ttatttctag attcatttct 660
 gtttatacaa tccccattac tgatgactag aaatacatta agactgattc agactgcctg 720
 gaatataagc aatcatttca gtatatgggt tgctaccagc ctcagcatct tttatctctt 780
 caagatagcc attttttcta actatctttt cttctacctg aagcggagag ttaaaagggt 840
 ggttttggtg atactgctgc tatccatgat ctttttggtt tttaatatat ttttagaaat 900
 caaacatatt gatgtctgga tctatggaac caaaagaaac ataactaatg gtttgagttc 960
 aaacagtttt tcagagtttt ccaggcttat ttaattcca agtttaaatgt tcacattagt 1020
 accctttggt gtatccttga tagctttcct cctcctaata ttttccctta tgaaacatgt 1080
 aaggaagatg cagtactaca ccaaaggatg caaagatgtc agaaccatgg cccacaccac 1140
 agccctgcag actgtgggtg ccttcctcct attatatact actttctttc tgtctctagt 1200
 tgtggaagtt tcaacacttg aaatggatga aagtctgatg cttctgtttg caaaagttac 1260

tataatgatt tttccttcca tccactcctg tatttttcatt ttgaaacata ataagttgag 1320
acaggacttg ctttcagtag tgaagtggct acagtattgg tgcaagcgtg agaaaacctt 1380
ggattcatag accattgtat gcattcacctt gaattattcta gaggggtgta ggttcatatg 1440
aaagtattga attttttaaatt ttgagccttt tgtatatttt ct 1482

<210> 135

<211> 305

<212> PRT

<213> Mus musculus

<400> 135

Met Asn Gly Val Leu Gln Val Thr Phe Ile Val Ile Leu Ser Val Glu
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Phe Ile Ile Gly Ile Phe Gly Asn Gly Phe Ile Ala Val Val Asn Ile
20 25 30
Lys Asp Leu Val Lys Gly Arg Lys Ile Ser Ser Val Asp Gln Ile Leu
35 40 45
Thr Ala Leu Ala Ile Ser Arg Ile Ala Leu Leu Trp Leu Ile Leu Val
50 55 60
Ser Trp Trp Ile Phe Val Leu Tyr Pro Gly Gln Trp Met Thr Asp Arg
65 70 75 80
Arg Val Ser Ile Met His Ser Ile Trp Thr Thr Phe Asn Gln Ser Ser
85 90 95
Leu Trp Phe Ala Thr Ser Leu Ser Ile Phe Tyr Phe Phe Lys Ile Ala
100 105 110
Asn Phe Ser Asn Pro Ile Phe Leu Tyr Leu Lys Val Arg Leu Lys Lys
115 120 125
Val Met Ile Gly Thr Leu Ile Met Ser Leu Ile Leu Phe Cys Leu Asn
130 135 140
Ile Ile Ile Met Asn Ala Pro Glu Asn Ile Leu Ile Thr Glu Tyr Asn
145 150 155 160
Val Ser Met Ser Tyr Ser Leu Ile Leu Asn Asn Thr Gln Leu Ser Met
165 170 175
Leu Phe Pro Phe Ala Asn Thr Met Phe Gly Phe Ile Pro Phe Ala Val
180 185 190
Ser Leu Val Thr Phe Val Leu Leu Val Phe Ser Leu Trp Lys His Gln
195 200 205
Arg Lys Met Gln His Ser Ala His Gly Cys Arg Asp Ala Ser Thr Lys
210 215 220

Ala His Ile Arg Ala Leu Gln Thr Leu Ile Ala Ser Leu Leu Leu Tyr
 225 230 235 240

Ser Ile Phe Phe Leu Ser His Val Met Lys Val Trp Ser Ala Leu Leu
 245 250 255

Leu Glu Arg Thr Leu Leu Leu Leu Ile Thr Gln Val Ala Arg Thr Ala
 260 265 270

Phe Pro Ser Val His Ser Trp Val Leu Ile Leu Gly Asn Ala Lys Met
 275 280 285

Arg Lys Ala Ser Leu Tyr Val Phe Leu Trp Leu Arg Cys Arg His Lys
 290 295 300

Glu
 305

<210> 136

<211> 1316

<212> DNA

<213> Mus musculus

<400> 136

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aagcatgttt caaagaatct taagtaatta caatagaaat tgaagcatcc aagtgaagat	180
gaatggtgtc ctacaggtta catttatagt cattttgagt gtggaattta taattggcat	240
ctttggcaat ggattcatag cggtggtgaa cataaaggac ttggtcaagg gaaggaagat	300
ctcttcagtg gatcagatcc tctactgtct ggccatctcc agaattgcac tgctgtgggt	360
aatattagta agttggtgga tatttgtgct ttaccaggga caatggatga ctgatagaag	420
agttagcata atgcacagta tatggacaac attcaaccag agtagtctct ggtttgctac	480
aagtctcagc atctttttatt ttttcaagat agcaaatttt tccaacccta tttttcttta	540
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atctatgtct tacagcttga ttttgaataa cacacagctt tctatgctgt ttccatttgc	720
caacaccatg tttgggttca taccttttgc tgtgtcactg gtcacttttg tccttcttgt	780
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cagcactaag gccacatca gagccttgca gacattgatt gcctccctcc tcctgtattc	900
cattttcttc ctgtctcatg ttatgaaggc ttggagtgc ctgcttctgg agaggacact	960
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caggcacaaa gaatgaaacc ctacagtgtg cagacctggg gtatatattat gtggatgatc 1140
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tgaattacat aaaaatgtat ataatatattt caaagtacaa gatagtagtt tataacttac 1260
atgataaata ctgtctatgc atcttctagt cttttagtaa tatgtaaaaa catgtt 1316

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<210> 137
<211> 330
<212> PRT
<213> Mus musculus

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<400> 137
Met Lys His Phe Trp Lys Ile Leu Ser Val Ile Ser Gln Ser Thr Leu
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Ser Val Ile Leu Ile Val Glu Leu Val Ile Gly Ile Ile Gly Asn Gly
          20          25          30

Phe Met Val Leu Val His Cys Met Asp Trp Val Lys Lys Lys Lys Met
          35          40          45

Ser Leu Val Asn Gln Ile Leu Thr Ala Leu Ser Ile Ser Arg Ile Phe
          50          55          60

Gln Leu Cys Leu Leu Phe Ile Ser Leu Val Ile Asn Phe Ser Tyr Thr
          65          70          75          80

Asp Leu Thr Thr Ser Ser Arg Met Ile Gln Val Met Tyr Asn Ala Trp
          85          90          95

Ile Leu Ala Asn His Phe Ser Ile Trp Ile Ala Thr Cys Leu Thr Val
          100          105          110

Leu Tyr Phe Leu Lys Ile Ala Asn Phe Ser Asn Ser Phe Phe Leu Tyr
          115          120          125

Leu Lys Trp Arg Val Glu Lys Val Val Ser Val Thr Leu Leu Val Ser
          130          135          140

Leu Leu Leu Leu Ile Leu Asn Ile Leu Leu Thr Asn Leu Glu Thr Asp
          145          150          155          160

Met Trp Thr Asn Glu Tyr Gln Arg Asn Ile Ser Cys Ser Phe Ser Ser
          165          170          175

His Tyr Tyr Ala Lys Cys His Arg Gln Val Leu Arg Leu His Ile Ile
          180          185          190

Phe Leu Ser Val Pro Val Val Leu Ser Leu Ser Thr Phe Leu Leu Leu
          195          200          205

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Ile Phe Ser Leu Trp Thr His His Lys Arg Met Gln Gln His Val Gln
 210 215 220
 Gly Gly Arg Asp Ala Arg Thr Thr Ala His Phe Lys Ala Leu Gln Thr
 225 230 235 240
 Val Ile Ala Phe Phe Leu Leu Tyr Ser Ile Phe Ile Leu Ser Val Leu
 245 250 255
 Ile Gln Ile Trp Lys Tyr Glu Leu Leu Lys Lys Asn Leu Phe Val Val
 260 265 270
 Phe Cys Glu Val Val Tyr Ile Ala Phe Pro Thr Phe His Ser Tyr Ile
 275 280 285
 Leu Ile Val Gly Asp Met Lys Leu Arg Gln Ala Cys Leu Pro Leu Cys
 290 295 300
 Ile Ile Ala Ala Glu Ile Gln Thr Thr Leu Cys Arg Asn Phe Arg Ser
 305 310 315 320
 Leu Lys Tyr Phe Arg Leu Cys Cys Ile Phe
 325 330

<210> 138

<211> 1354

<212> DNA

<213> Mus musculus

<400> 138

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agaaaaatac attttatgag aatcaactca gaggttgtca gaaattgtcg aaacagcatt	180
ttaaaaaattt acatctcaac tggatatatg agcaagtctt tataactgat atataaaatg	240
aagcactttt ggaagatatt atctgttatc tcccagagca cactttcagt cattttaatc	300
gtggaattag taattggaat tataggaaat gggttcatgg tcttgggtcca ctgtatggac	360
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agaatttttc agctctgttt attgtttata agtttagtaa tcaacttttc atatacagat	480
ttaactacaa gttcaaggat gatacaagtc atgtacaatg cttggatttt agccaaccat	540
ttcagcatct ggattgctac atgcctcact gtcctttatt ttctaaagat agccaatttt	600
tctaactctt tttttcttta tctaaagtgg agagttgaaa aagtagtttc agttacactg	660
ttggtgtcat tgctcctcct gattttaaat attttactaa ctaacttgga aaccgacatg	720
tggacaaatg aatatcaaag aaacatatca tgcagcttca gttctcatta ctatgcaaag	780
tgtcacaggc aggtgttaag gcttcacatt attttctgt ctgtccccgt tgttttgtcc	840

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attgcatttt tctactata ttccattttt attctgtctg tcttaataca aatttggaag     1020
tatgaattac tgaagaaaaa tcttttcggt gtattttgtg aggttggtata tatagctttt     1080
ccgacattcc attcatatat tctgattgta ggagacatga agctgagaca ggccctgcctg     1140
cctctctgta ttatcgcagc tgaaattcag actacactat gtagaaattt tagatcacta     1200
aagtacttta gattatgttg tatattctag acaaaaatta actgatacaa atgtcttttg     1260
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<210> 139

<211> 299

<212> PRT

<213> Mus musculus

<400> 139

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Met Val Pro Thr Gln Val Thr Ile Phe Ser Ile Ile Met Tyr Val Leu
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Glu Ser Leu Val Ile Ile Val Gln Ser Cys Thr Thr Val Ala Val Leu
20          25          30

Phe Arg Glu Trp Met His Phe Gln Arg Leu Ser Pro Val Glu Thr Ile
35          40          45

Leu Ile Ser Leu Gly Ile Ser His Phe Cys Leu Gln Trp Thr Ser Met
50          55          60

Leu Tyr Asn Phe Gly Thr Tyr Ser Arg Pro Val Leu Leu Phe Trp Lys
65          70          75          80

Val Ser Val Val Trp Glu Phe Met Asn Ile Leu Thr Phe Trp Leu Thr
85          90          95

Ser Trp Leu Ala Val Leu Tyr Cys Val Lys Val Ser Ser Phe Thr His
100         105         110

Pro Ile Phe Leu Trp Leu Arg Met Lys Ile Leu Lys Leu Val Leu Trp
115         120         125

Leu Ile Leu Gly Ala Leu Ile Ala Ser Cys Leu Ser Ile Ile Pro Ser
130         135         140

Val Val Lys Tyr His Ile Gln Met Glu Leu Val Thr Leu Asp Asn Leu
145         150         155         160

Pro Lys Asn Asn Ser Leu Ile Leu Arg Leu Gln Gln Phe Glu Trp Tyr
165         170         175

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Phe Ser Asn Pro Leu Lys Met Ile Gly Phe Gly Ile Pro Phe Phe Val
 180 185 190
 Phe Leu Ala Ser Ile Ile Leu Leu Thr Val Ser Leu Val Gln His Trp
 195 200 205
 Val Gln Met Lys His Tyr Ser Ser Ser Asn Ser Ser Leu Lys Ala Gln
 210 215 220
 Phe Thr Val Leu Lys Ser Leu Ala Thr Phe Phe Thr Phe Phe Thr Ser
 225 230 235 240
 Tyr Phe Leu Thr Ile Val Ile Ser Phe Ile Gly Thr Val Phe Asp Lys
 245 250 255
 Lys Ser Trp Phe Trp Val Cys Glu Ala Val Ile Tyr Gly Leu Val Cys
 260 265 270
 Ile His Phe Thr Ser Leu Met Met Ser Asn Pro Ala Leu Lys Lys Ala
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 290 295

<210> 140
 <211> 2887
 <212> DNA
 <213> Mus musculus

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 aatcaattcc ttaattataa gctattgttt cattatttca tttcctacgt ttttttgcac 180
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<210> 141

<211> 335

<212> PRT

<213> Mus musculus

<400> 141

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Phe Leu Thr Gly Val Leu Ala Asn Gly Leu Ile Val Val Val Asn Ala
 20 25 30

Ile Asp Leu Ile Met Trp Lys Lys Met Ala Pro Leu Asp Leu Leu Leu
 35 40 45

Phe Cys Leu Ala Thr Ser Arg Ile Ile Leu Gln Leu Cys Ile Leu Phe
 50 55 60

Ala Gln Leu Gly Leu Ser Cys Leu Val Arg His Thr Leu Phe Ala Asp
 65 70 75 80

Asn Val Thr Phe Val Tyr Ile Ile Asn Glu Leu Ser Leu Trp Phe Ala
 85 90 95

Thr Trp Leu Gly Val Phe Tyr Cys Ala Lys Ile Ala Thr Ile Pro His
 100 105 110

Pro Leu Phe Leu Trp Leu Lys Met Arg Ile Ser Arg Leu Val Pro Trp
 115 120 125

Leu Ile Leu Ala Ser Val Val Tyr Val Thr Val Thr Thr Phe Ile His
 130 135 140

Ser Arg Glu Thr Ser Glu Leu Pro Lys Gln Ile Phe Ile Ser Phe Phe
 145 150 155 160

Ser Lys Asn Thr Thr Arg Val Arg Pro Ala His Ala Thr Leu Leu Ser
 165 170 175

Val Phe Val Phe Gly Leu Thr Leu Pro Phe Leu Ile Phe Thr Val Ala
 180 185 190
 Val Leu Leu Leu Leu Ser Ser Leu Trp Asn His Ser Arg Gln Met Arg
 195 200 205
 Thr Met Val Gly Thr Arg Glu Pro Ser Arg His Ala Leu Val Ser Ala
 210 215 220
 Met Leu Ser Ile Leu Ser Phe Leu Ile Leu Tyr Leu Ser His Asp Met
 225 230 235 240
 Val Ala Val Leu Ile Cys Thr Gln Gly Leu His Phe Gly Ser Arg Thr
 245 250 255
 Phe Ala Phe Cys Leu Leu Val Ile Gly Met Tyr Pro Ser Leu His Ser
 260 265 270
 Ile Val Leu Ile Leu Gly Asn Pro Lys Leu Lys Arg Asn Ala Lys Thr
 275 280 285
 Phe Ile Val His Cys Lys Cys Cys His Cys Ala Arg Ala Trp Val Thr
 290 295 300
 Ser Arg Asn Pro Arg Leu Ser Asp Leu Pro Val Pro Ala Thr His His
 305 310 315 320
 Ser Ala Asn Lys Thr Ser Cys Ser Glu Ala Cys Ile Met Pro Ser
 325 330 335

<210> 142

<211> 1698

<212> DNA

<213> Mus musculus

<400> 142

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tctatggtat ctcttcctta ttgactgac attgagttga gaaggcagca ctataaacia      360
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atttaaagaa gtcattgggt cttcttattt taaaatgatg gaaggtcata tgctcttctt      540
ccttctggtc gtggtagtgc agtttttaac tggggtcttg gcaaatggcc tcattgtggt      600

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<210> 143

<211> 295

<212> PRT

<213> Mus musculus

<400> 143

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Met Asn Leu Val Glu Trp Ile Val Thr Ile Ile Met Met Thr Glu Phe
1           5           10           15

```

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Leu Leu Gly Asn Cys Ala Asn Val Phe Ile Thr Ile Val Asn Phe Ile
20           25           30

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Asp Cys Val Lys Arg Arg Lys Ile Ser Ser Ala Asp Arg Ile Ile Thr
35           40           45

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Ala Ile Ala Ile Phe Arg Ile Gly Leu Leu Trp Ala Met Leu Thr Asn
50           55           60

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Trp His Ser His Val Phe Thr Pro Asp Thr Asp Asn Leu Gln Met Arg
 65 70 75 80
 Val Phe Gly Gly Ile Thr Trp Ala Ile Thr Asn His Phe Thr Thr Trp
 85 90 95
 Leu Gly Thr Ile Leu Ser Met Phe Tyr Leu Phe Lys Ile Ala Asn Phe
 100 105 110
 Ser Asn Ser Leu Phe Leu His Leu Lys Arg Lys Leu Asp Asn Val Leu
 115 120 125
 Leu Val Ile Phe Leu Gly Ser Ser Leu Phe Leu Val Ala Tyr Leu Gly
 130 135 140
 Met Val Asn Ile Lys Lys Ile Ala Trp Met Ser Ile His Glu Gly Asn
 145 150 155 160
 Val Thr Thr Lys Ser Lys Leu Lys His Val Thr Ser Ile Thr Asn Met
 165 170 175
 Leu Leu Phe Ser Leu Ile Asn Ile Val Pro Phe Gly Ile Ser Leu Asn
 180 185 190
 Cys Val Leu Leu Leu Ile Tyr Ser Leu Ser Lys His Leu Lys Asn Met
 195 200 205
 Lys Phe Tyr Gly Lys Gly Cys Gln Asp Gln Ser Thr Met Val His Ile
 210 215 220
 Lys Ala Leu Gln Thr Val Val Ser Phe Leu Leu Leu Tyr Ala Thr Tyr
 225 230 235 240
 Ser Ser Cys Val Ile Ile Ser Gly Trp Ser Leu Gln Asn Ala Pro Val
 245 250 255
 Phe Leu Phe Cys Val Thr Ile Gly Ser Phe Tyr Pro Ala Gly His Ser
 260 265 270
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 290 295

<210> 144

<211> 1394

<212> DNA

<213> Mus musculus

<400> 144

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atttgaagca atggaccaga attcctcttt atttgactct tagcaaattg gaatgcagca 180

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<210> 145

<211> 305

<212> PRT

<213> Mus musculus

<400> 145

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Met Gly Ser Asn Val Tyr Gly Ile Leu Thr Met Val Met Ile Ala Glu
1           5           10           15

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Phe Val Phe Gly Asn Met Ser Asn Gly Phe Ile Val Leu Ile Asn Cys
20           25           30

```

```

Ile Asp Trp Val Arg Lys Gly Thr Leu Ser Ser Ile Gly Trp Ile Leu
35           40           45

```

Leu Phe Leu Ala Ile Ser Arg Met Val Leu Ile Trp Glu Met Leu Ile
 50 55 60
 Thr Trp Ile Lys Tyr Met Lys Tyr Ser Phe Ser Phe Val Thr Gly Thr
 65 70 75 80
 Glu Leu Arg Gly Ile Met Phe Thr Trp Val Ile Ser Asn His Phe Ser
 85 90 95
 Leu Trp Leu Ala Thr Ile Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala
 100 105 110
 Ser Phe Ser Lys Pro Val Phe Leu Tyr Leu Lys Trp Arg Glu Lys Lys
 115 120 125
 Val Leu Leu Ile Val Leu Leu Gly Asn Leu Ile Phe Leu Met Leu Asn
 130 135 140
 Ile Leu Gln Ile Asn Lys His Ile Glu His Trp Met Tyr Gln Tyr Glu
 145 150 155 160
 Arg Asn Ile Thr Trp Ser Ser Arg Val Ser Asp Phe Ala Gly Phe Ser
 165 170 175
 Asn Leu Val Leu Leu Glu Met Ile Val Phe Ser Val Thr Pro Phe Thr
 180 185 190
 Val Ala Leu Val Ser Phe Ile Leu Leu Ile Phe Ser Leu Trp Lys His
 195 200 205
 Leu Gln Lys Met His Leu Asn Ser Arg Gly Glu Arg Asp Pro Ser Thr
 210 215 220
 Lys Ala His Val Asn Ala Leu Arg Ile Met Val Ser Phe Leu Leu Leu
 225 230 235 240
 Tyr Ala Thr Tyr Phe Ile Ser Phe Phe Leu Ser Leu Ile Pro Met Ala
 245 250 255
 His Lys Thr Arg Leu Gly Leu Met Phe Ser Ile Thr Val Gly Leu Phe
 260 265 270
 Tyr Pro Ser Ser His Ser Phe Ile Leu Ile Leu Gly His Ser Asn Leu
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 His
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<210> 146

<211> 2567

<212> DNA

<213> Mus musculus

<400> 146
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 aaagcattag aatttcacta ttccataagg cagccaaacc acgtgctact aggtatatga 1740

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<210> 147

<211> 309

<212> PRT

<213> Mus musculus

<400> 147

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Phe Ile Ile Gly Thr Leu Gly Asn Gly Phe Ile Val Leu Ile Asn Ser
20          25          30

Thr Ser Trp Phe Lys Asn Gln Lys Ile Ser Val Ile Asp Phe Ile Leu
35          40          45

Thr Trp Leu Ala Ile Ser Arg Met Cys Val Leu Trp Thr Thr Ile Ala
50          55          60

Gly Ala Ser Leu Arg Lys Phe Tyr Lys Thr Leu Ser Tyr Ser Lys Asn
65          70          75          80

Phe Lys Phe Cys Phe Asp Ile Ile Trp Thr Gly Ser Asn Tyr Leu Cys
85          90          95

Ile Ala Cys Thr Thr Cys Ile Ser Val Phe Tyr Leu Phe Lys Ile Ala
100         105         110

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Asn Phe Ser Asn Ser Ile Phe Phe Trp Ile Lys Gln Arg Ile His Ala
 115 120 125
 Val Leu Leu Ala Ile Val Leu Gly Thr Leu Met Tyr Phe Ile Leu Phe
 130 135 140
 Leu Ile Phe Met Lys Met Ile Ala Asn Asn Phe Ile Tyr Lys Trp Thr
 145 150 155 160
 Lys Leu Glu Gln Asn Thr Thr Phe Pro Val Leu Asp Thr Leu Ser Gly
 165 170 175
 Phe Leu Val Tyr His Ser Leu Tyr Asn Gly Ile Leu Ile Phe Phe Phe
 180 185 190
 Ile Val Ser Leu Thr Ser Phe Leu Leu Leu Ile Phe Ser Leu Trp Ser
 195 200 205
 His Leu Arg Arg Met Lys Leu Gln Gly Ile His Thr Lys Asp Ile Ser
 210 215 220
 Thr Glu Ala His Ile Lys Ala Met Lys Thr Met Met Ser Phe Leu Leu
 225 230 235 240
 Phe Phe Ile Ile Tyr Tyr Ile Ser Asn Ile Met Leu Ile Val Ala Ser
 245 250 255
 Ser Ile Leu Asp Asn Val Val Ala Gln Ile Phe Ser Tyr Asn Leu Ile
 260 265 270
 Phe Leu Tyr Leu Ser Val His Pro Phe Leu Leu Val Leu Trp Asn Ser
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<210> 148

<211> 1488

<212> DNA

<213> Mus musculus

<400> 148

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agcagagaac aaaatgatag ccttgataat tgttgggttg ctcaagaaaa atgggtgtat	180
actttaacat ttaattggga actcagttga gagcatacat ttaggggtttt acagaggtat	240
tcattgccca tttaagattt ggattcacac atctacatca atgtggctgt aatccatttt	300
cccatgatga aataaggtag agactgccta ttaaacgaca tgtcgagcct actggagatt	360


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cttacttggt tggccatctc cagaatgtgt gttctatgga caacaattgc tgggtgcctct 540
ctcaggaaat tctacaagac gttaagttac tctaagaatt tcaaattttg ttttgacatt 600
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ttgttcaaga ttgccaaactt ttctaattcc attttcttct ggattaaaca gagaattcat 720
gcagtacttc tggctattgt cctaggcaca ctcatgtatt tcattttatt tctcattttt 780
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ggaacaagga ataaagagga gaaatatatt ctttttcaga tcatctgctc tgtcattctg 1380
tccttagcat gctattaaga attgttgact aaatccagtc atttttaaca tgaggaaagg 1440
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<210> 149

<211> 333

<212> PRT

<213> Mus musculus

<400> 149

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Met Phe Ser Gln Lys Ile Asn Tyr Ser His Leu Phe Thr Phe Ser Ile
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          20           25           30

Ala Leu Val Asn Ile Met Asp Trp Val Lys Arg Arg Arg Ile Ser Ser
          35           40           45

Val Asp Gln Ile Leu Thr Ala Leu Ala Leu Thr Arg Phe Ile Tyr Val
          50           55           60

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Leu	Ser	Met	Leu	Ile	Cys	Ile	Leu	Leu	Phe	Met	Leu	Cys	Pro	His	Leu
65					70					75					80
Pro	Arg	Arg	Ser	Glu	Met	Leu	Ser	Ala	Met	Gly	Ile	Phe	Trp	Val	Val
			85						90					95	
Asn	Ser	His	Phe	Ser	Ile	Trp	Leu	Thr	Thr	Cys	Leu	Gly	Val	Phe	Tyr
			100					105					110		
Phe	Leu	Lys	Ile	Ala	Asn	Phe	Ser	Asn	Ser	Phe	Phe	Leu	Tyr	Leu	Lys
		115					120					125			
Trp	Arg	Val	Lys	Lys	Val	Ile	Leu	Ile	Ile	Ile	Leu	Ala	Ser	Leu	Ile
	130					135					140				
Phe	Leu	Thr	Leu	His	Ile	Leu	Ser	Leu	Gly	Ile	Tyr	Asp	Gln	Phe	Ser
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Ile	Ala	Ala	Tyr	Val	Gly	Asn	Met	Ser	Tyr	Ser	Leu	Thr	Asp	Leu	Thr
				165					170					175	
Gln	Phe	Ser	Ser	Thr	Phe	Leu	Phe	Ser	Asn	Ser	Ser	Asn	Val	Phe	Leu
			180					185					190		
Ile	Thr	Asn	Ser	Ser	His	Val	Phe	Leu	Pro	Ile	Asn	Ser	Leu	Phe	Met
		195					200					205			
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	210					215					220				
Ser	Leu	Trp	Lys	His	His	Lys	Lys	Met	Gln	Val	Asn	Ala	Lys	Gln	Pro
225					230					235					240
Arg	Asp	Val	Ser	Thr	Met	Ala	His	Ile	Lys	Ala	Leu	Gln	Thr	Val	Phe
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Ser	Phe	Leu	Leu	Leu	Tyr	Ala	Ile	Tyr	Leu	Leu	Phe	Leu	Ile	Ile	Gly
		260					265						270		
Ile	Leu	Asn	Leu	Gly	Leu	Met	Glu	Lys	Ile	Val	Ile	Leu	Ile	Phe	Asp
	275						280					285			
His	Ile	Ser	Gly	Ala	Val	Phe	Pro	Ile	Ser	His	Ser	Phe	Val	Leu	Ile
	290					295					300				
Leu	Gly	Asn	Ser	Lys	Leu	Arg	Gln	Ala	Ser	Leu	Ser	Val	Leu	Pro	Cys
305					310					315					320
Leu	Arg	Cys	Gln	Ser	Lys	Asp	Met	Asp	Thr	Met	Gly	Leu			
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<210> 150

<211> 1442

<212> DNA

<213> Mus musculus

<400> 150
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 gaaatagtaa cggaatctt aggacatgga ttcatagcat tagtgaacat catggactgg 180
 gtcaaaagaa gaaggatctc ttcagtggat cagattctca ctgctttggc ccttaccaga 240
 ttcattttatg tcttgtctat gctgatttgc atattgttat tcatgctgtg cccacatttg 300
 cctaggagat cagaaatgct ttcagcaatg ggtattttct gggtagtcaa cagccatttt 360
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 aactcttttt ttctttatct aaagtggaga gttaaaaaag tgattttaat aataatcctg 480
 gcatcactga ttttcttgac tttacacatt ttatcttttag ggatatatga tcagttctca 540
 attgctgctt atgtaggaaa tatgtcttat agtttgacag atttaacaca attttccagt 600
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 ttacccatca actccctggt catgctcata cccttcacag tgtccctggg agcctttctc 720
 atgctcatct tctcactgtg gaagcatcac aaaaagatgc aggtcaatgc caaacaacct 780
 agagatgtca gtactatggc ccacattaaa gccttgcaa ctgtgttctc cttcctgctg 840
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 aaaatagtga tactgatatt tgaccacatt tctggagcag tttttcctat aagccactca 960
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 actagcacta tataagtggg ctcatacagg atatgggaaa ggaaagattt atgcaataaa 1260
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 aatcatgcta atctaaaaaa atctgtaatg catttcattc agactatata catatatgcc 1380
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 ag 1442

<210> 151

<211> 309

<212> PRT

<213> Mus musculus

<400> 151

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			20					25					30		
Ile	Asp	Trp	Ile	Asn	Lys	Lys	Glu	Leu	Ser	Thr	Val	Asp	Gln	Ile	Leu
		35					40					45			
Ile	Val	Leu	Ala	Ile	Ser	Arg	Ile	Ser	Leu	Ile	Trp	Glu	Thr	Leu	Ile
	50					55					60				
Ile	Trp	Val	Lys	Asp	Gln	Leu	Ile	Ser	Ser	Ile	Thr	Ile	Glu	Glu	Leu
65					70					75					80
Lys	Ile	Ile	Val	Phe	Ser	Phe	Ile	Leu	Ser	Ser	His	Phe	Ser	Leu	Trp
				85					90					95	
Leu	Ala	Thr	Ala	Leu	Ser	Ile	Phe	Tyr	Leu	Phe	Arg	Ile	Pro	Asn	Cys
			100					105					110		
Tyr	Trp	Gln	Ile	Phe	Leu	Tyr	Leu	Lys	Trp	Arg	Ile	Lys	Gln	Leu	Ile
		115					120					125			
Val	His	Met	Leu	Leu	Gly	Ser	Leu	Val	Phe	Leu	Val	Ala	Asn	Met	Ile
		130				135					140				
Gln	Ile	Thr	Ile	Thr	Leu	Glu	Glu	Arg	Phe	Tyr	Gln	Tyr	Gly	Gly	Asn
145					150					155					160
Thr	Ser	Val	Asn	Ser	Met	Glu	Thr	Glu	Phe	Ser	Ile	Leu	Ile	Glu	Leu
				165					170					175	
Met	Leu	Phe	Asn	Met	Thr	Met	Phe	Ser	Ile	Ile	Pro	Phe	Ser	Leu	Ala
			180					185					190		
Leu	Ile	Ser	Phe	Leu	Leu	Leu	Ile	Phe	Ser	Leu	Trp	Lys	His	Leu	Gln
		195					200					205			
Lys	Met	Pro	Leu	Asn	Ser	Arg	Gly	Asp	Arg	Asp	Pro	Ser	Ala	Thr	Ala
	210					215					220				
His	Arg	Asn	Ala	Leu	Arg	Ile	Leu	Val	Ser	Phe	Leu	Leu	Leu	Tyr	Thr
225					230					235					240
Ile	Tyr	Phe	Leu	Ser	Leu	Leu	Ile	Ser	Trp	Val	Ala	Gln	Lys	Asn	Gln
				245					250					255	
Ser	Glu	Leu	Val	His	Ile	Ile	Cys	Met	Ile	Thr	Ser	Leu	Val	Tyr	Pro
			260					265					270		
Ser	Phe	His	Ser	Tyr	Ile	Leu	Ile	Leu	Gly	Asn	Tyr	Lys	Leu	Lys	Gln
		275					280					285			

Thr Ser Leu Trp Val Met Arg Gln Leu Gly Cys Arg Met Lys Arg Gln
 290 295 300

Asn Thr Pro Thr Thr
 305

<210> 152

<211> 1465

<212> DNA

<213> Mus musculus

<400> 152

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gtctctccac	catcatacta	attgcagagt	ttgtttgggg	aaatttgagc	aatgggttga	180
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tactcattgt	cttggcaatt	tcaagaatta	gtctcatctg	ggaaacacta	attatatggg	300
ttaaagatca	actaatttca	tctattacta	ttgaagaatt	aaaaataatt	gtgttcagct	360
ttatactatc	tagccacttc	agtctctggc	ttgctacagc	tctcagcatc	ttctatttat	420
tcagaatacc	taattgctac	tggcagatct	ttctctactt	gaaatggaga	ataaagcaac	480
tgattgtcca	catgcttctg	ggaagcttgg	tggtcttggg	tgcaaataatg	atacagataa	540
ccatcactct	tgaagagagg	ttctatcaat	atggaggaaa	tacaagtgtg	aattccatgg	600
agactgagtt	ctcaattttg	atagagctga	tgttatttaa	catgactatg	ttctccatta	660
taccattttc	attggcctta	atttcttttc	ttctgcta	atttctctta	tggaacatc	720
tccagaagat	gccactcaat	tctagaggag	atagagaccc	tagtgctacg	gccacagaa	780
atgccttgag	aattttgggc	tccttcctct	tgctctatac	tatatatttc	ctgtctcttc	840
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ggaagtagtt	caataacatt	tttccccttg	acatggagta	gcagggtttt	tttttattag	1140
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cctgttcccc	taccaccca	ctcccacttc	ttggccctgg	cattcccctg	gagtatcagt	1260
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tgatccgag ctccgtacca agctt 1465

<210> 153

<211> 311

<212> PRT

<213> Mus musculus

<400> 153

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Ile Ile Asp Trp Val Lys Arg Arg Lys Ile Ser Leu Met Asp Lys Ile
35 40 45

Ile Thr Ala Leu Ala Ile Ser Arg Ile Tyr Leu Leu Trp Ser Thr Phe
50 55 60

Leu Ile Thr Leu Thr Ser Ser Leu Asp Pro Asp Ile Lys Met Ala Val
65 70 75 80

Lys Ile Ile Arg Ile Ser Asn Asn Thr Trp Ile Ile Ala Asn His Phe
85 90 95

Ser Ile Trp Phe Ala Thr Cys Leu Ser Ile Phe Tyr Phe Leu Lys Ile
100 105 110

Ala Asn Phe Ser Asn Tyr Ile Phe Leu Tyr Leu Arg Trp Arg Phe Lys
115 120 125

Lys Val Val Ser Val Thr Leu Leu Ile Ser Leu Ile Phe Leu Leu Leu
130 135 140

Asn Ile Leu Leu Met Asn Met His Ile Asp Ile Trp Ser Asp Lys Ser
145 150 155 160

Lys Arg Asn Leu Ser Phe Ser Val Arg Ser Asn Asn Cys Thr Gln Phe
165 170 175

Pro Arg Leu Val Leu Leu Ile Asn Thr Met Phe Thr Ser Ile Pro Phe
180 185 190

Thr Val Ser Leu Leu Ala Phe Leu Leu Leu Ile Phe Ser Leu Trp Arg
195 200 205

His Leu Lys Thr Met Gln Tyr Tyr Ala Lys Gly Ser Glu Asp Thr Thr
210 215 220

Thr Ala Ala His Ile Lys Ala Leu His Met Val Val Ala Phe Leu Leu
225 230 235 240

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<210> 154
<211> 1103
<212> DNA
<213> Mus musculus
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	aattcataat	tgggaatatt	gcaaattggat	tcatagcatt	ggtgaacatc	atagactggg	180
	tgaagagaag	aaaaatctct	ttaatggata	agatcattac	tgctttggca	atctctagga	240
	tttatctgct	gtgggtctaca	ttcttaatta	cactaacatc	ttcactggat	ccagatatta	300
	aatgggctgt	gaaaatcatt	agaataagca	ataacacctg	gattattgca	aatcatttca	360
	gcatttggtt	tgctacatgt	ctcagcatct	tttattttct	caagatagcc	aattttttcta	420
	actatatttt	tctctactta	aggtggagat	ttaagaaggt	ggtttcagtg	acattgctaa	480
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<210> 155
<211> 308
<212> PRT
<213> Mus musculus

<400> 155
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20 25 30
Arg Glu Trp Leu Leu Arg Gly Arg Leu Leu Pro Ser Asp Met Ile Leu
35 40 45
Phe Ser Leu Gly Thr Ser Arg Phe Phe Gln Gln Cys Val Gly Leu Val
50 55 60
Asn Ser Phe Tyr Tyr Phe Leu His Leu Val Glu Tyr Ser Gly Ser Leu
65 70 75 80
Ala Arg Gln Leu Ile Ser Leu His Trp Asp Phe Leu Asn Ser Ala Thr
85 90 95
Phe Trp Phe Cys Thr Trp Leu Ser Val Leu Phe Cys Ile Lys Ile Ala
100 105 110
Asn Phe Ser His Pro Ala Phe Leu Trp Leu Lys Trp Arg Phe Pro Ala
115 120 125
Leu Val Pro Trp Phe Leu Leu Gly Ser Ile Leu Val Ser Val Ile Val
130 135 140
Thr Leu Leu Phe Phe Trp Gly Asn His Thr Ile Tyr Gln Ala Phe Leu
145 150 155 160
Arg Arg Lys Phe Thr Gly Asn Thr Thr Phe Lys Glu Trp Asn Arg Arg
165 170 175
Leu Glu Ile Asp Tyr Phe Met Pro Leu Lys Val Val Thr Met Ser Ile
180 185 190
Pro Cys Ser Leu Phe Leu Val Ser Ile Leu Leu Leu Ile Ser Ser Leu
195 200 205
Arg Arg His Ser Leu Arg Met Gln His Asn Thr His Ser Leu Gln Asp
210 215 220
Pro Asn Val Gln Ala His Ser Arg Ala Leu Lys Ser Leu Ile Ser Phe
225 230 235 240
Leu Val Leu Tyr Ala Val Ser Phe Val Ser Met Ile Ile Asp Ala Thr
245 250 255

Val Phe Ile Ser Ser Asp Asn Val Trp Tyr Trp Pro Trp Gln Ile Ile
 260 265 270

Leu Tyr Phe Cys Met Ser Val His Pro Phe Ile Leu Ile Thr Asn Asn
 275 280 285

Leu Arg Phe Arg Gly Thr Phe Arg Gln Leu Leu Leu Leu Ala Arg Gly
 290 295 300

Phe Trp Val Ala
 305

<210> 156
 <211> 3437
 <212> DNA
 <213> Mus musculus

<400> 156
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 gatgttggtc atagagtaca aaaattcagc taagaactca gtcctggagg ctgaatgtat 180
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caagcatggc agcatgtagg caaaatcaga gaaggcaa	catgagcagc tgctgcccc	1200
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caaggcaatc agtggtgaca ggaggaggga ctgaaatgct	accaacatta tcagttttct	1440
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 <212> DNA
 <213> Mus musculus

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 <212> PRT
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Val His Asn Phe Tyr Tyr Ser Ala Gln Lys Val Glu Tyr Ser Gly Gly
           35           40           45
Leu Gly Arg Gln Phe Phe His Leu His Trp His Phe Leu Asn Ser Ala
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Ala Asn

<210> 159
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 <212> DNA
 <213> Mus musculus

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 Thr Ala Leu Ala Phe Ser Arg Ile Tyr Leu Leu Leu Thr Val Phe Thr
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 Val Ile Ala Val Ser Thr Leu Tyr Thr His Val Leu Val Thr Arg Arg
 65 70 75 80
 Val Val Lys Leu Ile Asn Phe His Leu Leu Phe Ser Asn His Phe Ser
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 100 105 110
 His Phe Pro Asn Ser Ile Phe Val Tyr Leu Lys Met Arg Ile Asn Gln
 115 120 125
 Val Val Ser Gly Thr Leu Leu Met Ser Leu Gly Leu Leu Phe Leu Asn
 130 135 140

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Glu	His	Leu	Leu	Tyr	Asp	Phe	Thr	Ser	Asn	Asn	Thr	Ala	Ser	Phe	Tyr
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Arg	Val	Ile	Leu	Val	Ile	Asn	Asn	Cys	Ile	Phe	Thr	Ser	Ile	Pro	Phe
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Thr	Leu	Ser	Gln	Ser	Thr	Phe	Leu	Leu	Leu	Ile	Phe	Ser	Leu	Trp	Arg
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His	Tyr	Lys	Lys	Met	Gln	Gln	His	Ala	Gln	Arg	Cys	Arg	Asp	Val	Leu
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Ala	Asp	Ala	His	Ile	Arg	Val	Leu	Gln	Thr	Met	Val	Thr	Tyr	Val	Leu
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Leu	Cys	Ala	Ile	Phe	Phe	Leu	Ser	Leu	Ser	Met	Gln	Ile	Leu	Arg	Ser
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<211> 1108

<212> DNA

<213> Mus musculus

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<210> 162

<211> 312

<212> PRT

<213> Mus musculus

<400> 162

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Met Gly Trp Met Lys Asn Arg Lys Ile Ala Ser Ile Asp Leu Ile Leu
35          40          45
Ser Ser Val Ala Met Ser Arg Ile Cys Leu Gln Cys Ile Ile Leu Leu
50          55          60
Asp Cys Ile Ile Leu Val Gln Tyr Pro Asp Thr Tyr Asn Arg Gly Lys
65          70          75          80
Glu Met Arg Thr Val Asp Phe Phe Trp Thr Leu Thr Asn His Leu Ser
85          90          95
Val Trp Phe Ala Thr Cys Leu Ser Ile Phe Tyr Leu Phe Lys Ile Ala
100         105         110
Asn Phe Phe His Pro Leu Phe Leu Trp Ile Lys Trp Arg Ile Asp Lys
115         120         125
Leu Ile Leu Arg Thr Leu Leu Ala Cys Val Ile Ile Ser Leu Cys Phe
130         135         140
Ser Leu Pro Val Thr Glu Asn Leu Ser Asp Asp Phe Arg Arg Cys Val
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 Trp Arg His Thr Arg Gln Ile Gln Leu Ser Val Thr Gly Tyr Lys Asp
 210 215 220
 Pro Ser Thr Thr Ala His Val Lys Ala Met Lys Ala Val Ile Ser Phe
 225 230 235 240
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 245 250 255
 Ser Tyr Phe Met Pro Glu Ser Glu Leu Ala Val Ile Trp Gly Glu Leu
 260 265 270
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<211> 3775

<212> DNA

<213> Mus musculus

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<212> PRT

<213> Mus musculus

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<210> 166

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic T2R
Family Consensus Sequence 1

<220>

<221> MOD_RES

<222> (2)

<223> Phe or Ala

<220>

<221> MOD_RES

<222> (3)

<223> Ile, Val or Leu

<220>

<221> MOD_RES

<222> (4)

<223> Val or Leu

<220>

<221> MOD_RES

<222> (6)

<223> Ile or Val

<220>

<221> MOD_RES

<222> (7)

<223> Leu or Val

<220>

<221> MOD_RES

<222> (10)

<223> Gly or Thr

<220>

<221> MOD_RES

<222> (13)

<223> Val or Ala

<220>

<221> MOD_RES

<222> (18)

<223> Ile or Met

<400> 166

Glu Xaa Xaa Xaa Gly Xaa Xaa Gly Asn Xaa Phe Ile Xaa Leu Val Asn
1 5 10 15

Cys Xaa Asp Trp
20

<210> 167
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic T2R
Family Consensus Sequence 2

<220>
<221> MOD_RES
<222> (1)
<223> Asp or Gly

<220>
<221> MOD_RES
<222> (2)
<223> Phe or Leu

<220>
<221> MOD_RES
<222> (3)
<223> Ile or Leu

<220>
<221> MOD_RES
<222> (5)
<223> Thr or Ile

<220>
<221> MOD_RES
<222> (6)
<223> Gly, Ala or Ser

<220>
<221> MOD_RES
<222> (13)
<223> Cys, Gly or Phe

<400> 167
Xaa Xaa Xaa Leu Xaa Xaa Leu Ala Ile Ser Arg Ile Xaa Leu
1 5 10

<210> 168
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic T2R
Family Consensus Sequence 3

<220>
 <221> MOD_RES
 <222> (3)
 <223> Leu or Phe

<220>
 <221> MOD_RES
 <222> (4)
 <223> Ser, Thr or Asn

<220>
 <221> MOD_RES
 <222> (5)
 <223> Leu, Ile or Val

<220>
 <221> MOD_RES
 <222> (7)
 <223> Phe or Leu

<220>
 <221> MOD_RES
 <222> (8)
 <223> Ala or Thr

<220>
 <221> MOD_RES
 <222> (10)
 <223> Cys, Ser or Asn

<220>
 <221> MOD_RES
 <222> (12)
 <223> Ser, Asn or Gly

<220>
 <221> MOD_RES
 <222> (13)
 <223> Ile or Val

<400> 168
 Asn His Xaa Xaa Xaa Trp Xaa Xaa Thr Xaa Leu Xaa Xaa
 1 5 10

<210> 169
 <211> 18
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic T2R
 Family Consensus Sequence 4

<220>
 <221> MOD_RES
 <222> (2)
 <223> Phe or Cys

<220>
 <221> MOD_RES
 <222> (7)
 <223> Asn or Ser

<220>
 <221> MOD_RES
 <222> (10)
 <223> His or Asn

<220>
 <221> MOD_RES
 <222> (11)
 <223> Pro or Ser

<220>
 <221> MOD_RES
 <222> (12)
 <223> Leu, Ile or Val

<220>
 <221> MOD_RES
 <222> (15)
 <223> Trp or Tyr

<400> 169
 Phe Tyr Xaa Leu Lys Ile Ala Xaa Phe Ser Xaa Xaa Xaa Phe Leu Xaa
 1 5 10 15

Leu Lys

<210> 170
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic T2R
 Family Consensus Sequence 5

<220>
 <221> MOD_RES
 <222> (4)
 <223> Ile, Phe or Val

<220>
 <221> MOD_RES
 <222> (8)
 <223> Lys or Arg

<220>
 <221> MOD_RES
 <222> (10)
 <223> Ser or Thr

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<220>
<221> MOD_RES
<222> (11)
<223> Lys or Arg
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<220>
<221> MOD_RES
<222> (12)
<223> Gln or Lys
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<220>  
<221> MOD_RES  
<222> (13)  
<223> Met or Ile
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<220>  
<221> MOD_RES  
<222> (14)  
<223> Gln or Lys
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<400> 170
Leu Leu Ile Xaa Ser Leu Trp Xaa His Xaa Xaa Xaa Xaa
1             5             10
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<210> 171
<211> 14
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic T2R
Family Consensus Sequence 6

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<221> MOD_RES
<222> (3)
<223> Phe or Leu
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<220>  
<221> MOD_RES  
<222> (4)  
<223> Ile or Val
```

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<220>
<221> MOD_RES
<222> (7)
<223> Leu or Met
```

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<220>
<221> MOD_RES
<222> (8)
<223> Gly, Ser or Thr
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<220>  
<221> MOD_RES  
<222> (10)  
<223> Pro, Ser or Asn
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<220>
 <221> MOD_RES
 <222> (13)
 <223> Lys or Arg

<220>
 <221> MOD_RES
 <222> (14)
 <223> Gln or Arg

<400> 171
 His Ser Xaa Xaa Leu Ile Xaa Xaa Asn Xaa Lys Leu Xaa Xaa
 1 5 10

<210> 172
 <211> 1002
 <212> DNA
 <213> Homo sapiens

<400> 172
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 ttttgggatg tagtgaagag gcaggcactg agcaacagtg attgtgtgct gctgtgtctc 180
 agcatcagcc ggcttttctt gcattggactg ctgttctctga gtgctatcca gcttaccac 240
 ttccagaagt tgagtgaacc actgaaccac agctaccaag ccatcatcat gctatggatg 300
 attgcaaacc aagccaacct ctggcttgct gcctgcctca gcctgcttta ctgctccaag 360
 ctcatccgtt tctctcacac cttcctgacg tgcttggcaa gctgggtctc caggaagatc 420
 tcccagatgc tcctgggtat tattctttgc tcctgcatct gcaactgtct ctgtgtttgg 480
 tgctttttta gcagacctca cttcacagtc acaactgtgc tattcatgaa taacaatata 540
 aggctcaact ggcagattaa agatctcaat ttattttatt cctttctctt ctgctatctg 600
 tgggtctgtgc ctcttttctt attgtttctg gtttcttctg ggatgctgac tgtctccctg 660
 ggaaggcaca tgaggacaat gaaggctctat accagaaact ctctgaccc cagcctggag 720
 gccacatta aagccctcaa gtctcttgct tcctttttct gcttctttgt gatatcatcc 780
 tgtgttgctt tcatctctgt gccctactg attctgtggc gcgacaaaat aggggtgatg 840
 gtttgtgttg ggataatggc agcttgtccc tctgggcatg cagccatcct gatctcaggc 900
 aatgccaagt tgaggagagc tgtgatgacc attctgctct gggctcagag cagcctgaag 960
 gtaagagccg accacaaggc agattcccgg acactgtgct ga 1002

<210> 173
 <211> 333
 <212> PRT
 <213> Homo sapiens

<400> 173

Met	Leu	Thr	Leu	Thr	Arg	Ile	Arg	Thr	Val	Ser	Tyr	Glu	Val	Arg	Ser
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Thr	Phe	Leu	Phe	Ile	Ser	Val	Leu	Glu	Phe	Ala	Val	Gly	Phe	Leu	Thr
		20						25					30		
Asn	Ala	Phe	Val	Phe	Leu	Val	Asn	Phe	Trp	Asp	Val	Val	Lys	Arg	Gln
		35					40					45			
Ala	Leu	Ser	Asn	Ser	Asp	Cys	Val	Leu	Leu	Cys	Leu	Ser	Ile	Ser	Arg
	50					55					60				
Leu	Phe	Leu	His	Gly	Leu	Leu	Phe	Leu	Ser	Ala	Ile	Gln	Leu	Thr	His
65					70				75					80	
Phe	Gln	Lys	Leu	Ser	Glu	Pro	Leu	Asn	His	Ser	Tyr	Gln	Ala	Ile	Ile
			85						90					95	
Met	Leu	Trp	Met	Ile	Ala	Asn	Gln	Ala	Asn	Leu	Trp	Leu	Ala	Ala	Cys
			100					105					110		
Leu	Ser	Leu	Leu	Tyr	Cys	Ser	Lys	Leu	Ile	Arg	Phe	Ser	His	Thr	Phe
		115					120					125			
Leu	Ile	Cys	Leu	Ala	Ser	Trp	Val	Ser	Arg	Lys	Ile	Ser	Gln	Met	Leu
	130					135					140				
Leu	Gly	Ile	Ile	Leu	Cys	Ser	Cys	Ile	Cys	Thr	Val	Leu	Cys	Val	Trp
145					150					155				160	
Cys	Phe	Phe	Ser	Arg	Pro	His	Phe	Thr	Val	Thr	Thr	Val	Leu	Phe	Met
				165					170					175	
Asn	Asn	Asn	Thr	Arg	Leu	Asn	Trp	Gln	Ile	Lys	Asp	Leu	Asn	Leu	Phe
			180					185					190		
Tyr	Ser	Phe	Leu	Phe	Cys	Tyr	Leu	Trp	Ser	Val	Pro	Pro	Phe	Leu	Leu
		195					200					205			
Phe	Leu	Val	Ser	Ser	Gly	Met	Leu	Thr	Val	Ser	Leu	Gly	Arg	His	Met
	210					215					220				
Arg	Thr	Met	Lys	Val	Tyr	Thr	Arg	Asn	Ser	Arg	Asp	Pro	Ser	Leu	Glu
225					230					235				240	
Ala	His	Ile	Lys	Ala	Leu	Lys	Ser	Leu	Val	Ser	Phe	Phe	Cys	Phe	Phe
				245					250					255	
Val	Ile	Ser	Ser	Cys	Val	Ala	Phe	Ile	Ser	Val	Pro	Leu	Leu	Ile	Leu
			260					265					270		

Trp Arg Asp Lys Ile Gly Val Met Val Cys Val Gly Ile Met Ala Ala
 275 280 285

Cys Pro Ser Gly His Ala Ala Ile Leu Ile Ser Gly Asn Ala Lys Leu
 290 295 300

Arg Arg Ala Val Met Thr Ile Leu Leu Trp Ala Gln Ser Ser Leu Lys
 305 310 315 320

Val Arg Ala Asp His Lys Ala Asp Ser Arg Thr Leu Cys
 325 330

<210> 174

<211> 966

<212> DNA

<213> Homo sapiens

<400> 174

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atacatgcag ctgaatgggt tcaaaataag gcagtttcca caagtggcag gatcctgggt	180
ttcctgagtg tatccagaat agctctccaa agcctcatga tgtagaaat taccatcagc	240
tcaacctccc taagttttta ttctgaagac gctgtatatt atgcattcaa aataagtttt	300
atattcttaa atttttgtag cctgtgggtt gctgcctggc tcagtttctt ctactttgtg	360
aagattgcca atttctccta ccccttttcc ctcaaactga ggtggagaat tactggattg	420
ataccctggc ttctgtgggt gtccgtgttt atttccttca gtcacagcat gttctgcac	480
aacatctgca ctgtgtattg taacaattct ttccctatcc actcctccaa ctccactaag	540
aaaacatact tgtctgagat caatgtgggt ggtctggctt ttttctttta cctggggatt	600
gtgactcctc tgatcatgtt catcctgaca gccaccctgc tgatcctctc tctcaagaga	660
cacaccctac acatgggaag caatgccaca ggtccaacg accccagcat ggaggctcac	720
atggggggcca tcaaagctat cagctacttt ctatttctt acattttcaa tgcagttgct	780
ctgtttatct acctgtccaa catgtttgac atcaacagtc tgtggaataa tttgtgccag	840
atcatcatgg ctgcctaccc tgccagccac tcaattctac tgattcaaga taaccctggg	900
ctgagaagag cctggaagcg gcttcagctt cgacttcac tttacccaaa agagtggact	960
ctgtga	966

<210> 175

<211> 321

<212> PRT

<213> Homo sapiens

<400> 175

Met	Thr	Lys	Leu	Cys	Asp	Pro	Ala	Glu	Ser	Glu	Leu	Ser	Pro	Phe	Leu
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Ile	Thr	Leu	Ile	Leu	Ala	Val	Leu	Leu	Ala	Glu	Tyr	Leu	Ile	Gly	Ile
		20						25					30		
Ile	Ala	Asn	Gly	Phe	Ile	Met	Ala	Ile	His	Ala	Ala	Glu	Trp	Val	Gln
		35					40					45			
Asn	Lys	Ala	Val	Ser	Thr	Ser	Gly	Arg	Ile	Leu	Val	Phe	Leu	Ser	Val
	50					55					60				
Ser	Arg	Ile	Ala	Leu	Gln	Ser	Leu	Met	Met	Leu	Glu	Ile	Thr	Ile	Ser
65					70					75					80
Ser	Thr	Ser	Leu	Ser	Phe	Tyr	Ser	Glu	Asp	Ala	Val	Tyr	Tyr	Ala	Phe
			85						90					95	
Lys	Ile	Ser	Phe	Ile	Phe	Leu	Asn	Phe	Cys	Ser	Leu	Trp	Phe	Ala	Ala
			100					105					110		
Trp	Leu	Ser	Phe	Phe	Tyr	Phe	Val	Lys	Ile	Ala	Asn	Phe	Ser	Tyr	Pro
		115					120					125			
Leu	Phe	Leu	Lys	Leu	Arg	Trp	Arg	Ile	Thr	Gly	Leu	Ile	Pro	Trp	Leu
	130					135					140				
Leu	Trp	Leu	Ser	Val	Phe	Ile	Ser	Phe	Ser	His	Ser	Met	Phe	Cys	Ile
145					150					155					160
Asn	Ile	Cys	Thr	Val	Tyr	Cys	Asn	Asn	Ser	Phe	Pro	Ile	His	Ser	Ser
			165						170					175	
Asn	Ser	Thr	Lys	Lys	Thr	Tyr	Leu	Ser	Glu	Ile	Asn	Val	Val	Gly	Leu
		180						185					190		
Ala	Phe	Phe	Phe	Asn	Leu	Gly	Ile	Val	Thr	Pro	Leu	Ile	Met	Phe	Ile
		195					200					205			
Leu	Thr	Ala	Thr	Leu	Leu	Ile	Leu	Ser	Leu	Lys	Arg	His	Thr	Leu	His
	210					215					220				
Met	Gly	Ser	Asn	Ala	Thr	Gly	Ser	Asn	Asp	Pro	Ser	Met	Glu	Ala	His
225					230					235					240
Met	Gly	Ala	Ile	Lys	Ala	Ile	Ser	Tyr	Phe	Leu	Ile	Leu	Tyr	Ile	Phe
			245						250					255	
Asn	Ala	Val	Ala	Leu	Phe	Ile	Tyr	Leu	Ser	Asn	Met	Phe	Asp	Ile	Asn
		260						265					270		
Ser	Leu	Trp	Asn	Asn	Leu	Cys	Gln	Ile	Ile	Met	Ala	Ala	Tyr	Pro	Ala
		275					280					285			
Ser	His	Ser	Ile	Leu	Leu	Ile	Gln	Asp	Asn	Pro	Gly	Leu	Arg	Arg	Ala
	290					295					300				

Trp Lys Arg Leu Gln Leu Arg Leu His Leu Tyr Pro Lys Glu Trp Thr
 305 310 315 320

Leu

<210> 176

<211> 972

<212> DNA

<213> Homo sapiens

<400> 176

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gccatctatg gggctgagtg ggccaggggc aaaacactcc ccaactggtga ccgcattatg	180
ttgatgctga gcttttccag gctottgcta cagatttga tgatgctgga gaacattttc	240
agtctgctat tccgaattgt ttataaccaa aactcagtgt atatcctctt caaagtcac	300
actgtctttc tgaaccattc caatctctgg ttgctgcct ggctcaaagt cttctattgt	360
cttagaattg caaacttcaa tcatcctttg ttcttctga tgaagaggaa aatcatagt	420
ctgatgcctt ggcttctcag gctgtcagt ttggtttct taagcttcag ctttctctc	480
tcgagagatg tcttcaatgt gtatgtgaat agctccattc ctatcccctc ctccaactcc	540
acggagaaga agtacttctc tgagaccaat atgggtcaacc tggatatttt ctataacatg	600
gggatcttcg ttctctgat catgttcac ctggcagcca ccctgctgat cctctctctc	660
aagagacaca ccctacacat gggaagcaat gccacagggt ccagggagccc cagcatgaag	720
gctcacatag gggccatcaa agccaccagc tacttttctca tctctacat tttcaatgca	780
attgctctat ttctttccac gtccaacatc ttgacactt acagttcctg gaatattttg	840
tgcaagatca tcatggctgc ctaccctgcc ggccactcag tacaactgat cttgggcaac	900
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cagactctgt ga	972

<210> 177

<211> 323

<212> PRT

<213> Homo sapiens

<400> 177

Met Ala Thr Val Asn Thr Asp Ala Thr Asp Lys Asp Ile Ser Lys Phe
1 5 10 15

<210> 178
 <211> 930
 <212> DNA
 <213> Homo sapiens

<400> 178
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 aatttttgcta atggcttcat agcactggta aattccattg agtggttcaa gagacaaaag 120
 atctcctttg ctgaccaa atctcactgct ctggcggtct ccagagttgg ttgctctgg 180
 gtattattat taaactggta ttcaactgtg ttgaatccag cttttaatag tgtagaagta 240
 agaactactg cttataatat ctgggcagtg atcaaccatt tcagcaactg gcttgctact 300
 accctcagca tattttatatt gctcaagatt gccaatctt ccaactttat ttttcttcac 360
 ttaaagagga gagttaagag tgtcattctg gtgatgttgt tggggccttt gctatttttg 420
 gcttgctcatc tttttgtgat aaacatgaat gagattgtgc ggacaaaaga atttgaagga 480
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 atggtagcaa acttagtacc cttcactctg accctactat cttttatgct gttaatctgt 600
 tctttgtgta aacatctcaa gaagatgcag ctccatggta aaggatctca agatcccagc 660
 accaaggtcc acataaaagc tttgcaaact gtgatctcct tcctcttggt atgtgccatt 720
 tactttctgt ccataatgat atcagtttg agttttggaa gtctggaaaa caaacctgtc 780
 ttcatgtttc gcaaagctat tagattcagc tatccttcaa tccaccatt catcctgatt 840
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<210> 179
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 179
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 Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
 20 25 30
 Ile Glu Trp Phe Lys Arg Gln Lys Ile Ser Phe Ala Asp Gln Ile Leu
 35 40 45
 Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Leu Leu
 50 55 60

Asn Trp Tyr Ser Thr Val Leu Asn Pro Ala Phe Asn Ser Val Glu Val
 65 70 75 80
 Arg Thr Thr Ala Tyr Asn Ile Trp Ala Val Ile Asn His Phe Ser Asn
 85 90 95
 Trp Leu Ala Thr Thr Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
 100 105 110
 Phe Ser Asn Phe Ile Phe Leu His Leu Lys Arg Arg Val Lys Ser Val
 115 120 125
 Ile Leu Val Met Leu Leu Gly Pro Leu Leu Phe Leu Ala Cys His Leu
 130 135 140
 Phe Val Ile Asn Met Asn Glu Ile Val Arg Thr Lys Glu Phe Glu Gly
 145 150 155 160
 Asn Met Thr Trp Lys Ile Lys Leu Lys Ser Ala Met Tyr Phe Ser Asn
 165 170 175
 Met Thr Val Thr Met Val Ala Asn Leu Val Pro Phe Thr Leu Thr Leu
 180 185 190
 Leu Ser Phe Met Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
 195 200 205
 Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
 210 215 220
 Ile Lys Ala Leu Gln Thr Val Ile Ser Phe Leu Leu Leu Cys Ala Ile
 225 230 235 240
 Tyr Phe Leu Ser Ile Met Ile Ser Val Trp Ser Phe Gly Ser Leu Glu
 245 250 255
 Asn Lys Pro Val Phe Met Phe Cys Lys Ala Ile Arg Phe Ser Tyr Pro
 260 265 270
 Ser Ile His Pro Phe Ile Leu Ile Trp Gly Asn Lys Lys Leu Lys Gln
 275 280 285
 Thr Phe Leu Ser Val Phe Trp Gln Met Arg Tyr Trp Val Lys Gly Glu
 290 295 300
 Lys Thr Ser Ser Pro
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<210> 180

<211> 930

<212> DNA

<213> Homo sapiens

<400> 180

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gtttgtcacc ttgtgatgaa acacacgtat ataaatgtgt ggacagaaga atgtgaagga 480
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accaagatcc acataaaaagc tctgcaaact gtgacctcct tcctcatatt acttgccatt 720
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ttaatgcttt gccaaagcttt tggaatcata tatccatcat tccactcatt cattctgatt 840
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<210> 181

<211> 309

<212> PRT

<213> Homo sapiens

<400> 181

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Met Met Ser Phe Leu His Ile Val Phe Ser Ile Leu Val Val Val Ala
1          5          10          15

Phe Ile Leu Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Ile Asn Phe
20          25          30

Ile Ala Trp Val Lys Arg Gln Lys Ile Ser Ser Ala Asp Gln Ile Ile
35          40          45

Ala Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Ile Leu Leu
50          55          60

His Trp Tyr Ser Thr Val Leu Asn Pro Thr Ser Ser Asn Leu Lys Val
65          70          75          80

Ile Ile Phe Ile Ser Asn Ala Trp Ala Val Thr Asn His Phe Ser Ile
85          90          95

Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Val Asn
100         105         110

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Phe Ser Arg Leu Ile Phe His His Leu Lys Arg Lys Ala Lys Ser Val
 115 120 125
 Val Leu Val Ile Val Leu Gly Ser Leu Phe Phe Leu Val Cys His Leu
 130 135 140
 Val Met Lys His Thr Tyr Ile Asn Val Trp Thr Glu Glu Cys Glu Gly
 145 150 155 160
 Asn Val Thr Trp Lys Ile Lys Leu Arg Asn Ala Met His Leu Ser Asn
 165 170 175
 Leu Thr Val Ala Met Leu Ala Asn Leu Ile Pro Phe Thr Leu Thr Leu
 180 185 190
 Ile Ser Phe Leu Leu Leu Ile Tyr Ser Leu Cys Lys His Leu Lys Lys
 195 200 205
 Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Ile His
 210 215 220
 Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Ile Leu Leu Ala Ile
 225 230 235 240
 Tyr Phe Leu Cys Leu Ile Ile Ser Phe Trp Asn Phe Lys Met Arg Pro
 245 250 255
 Lys Glu Ile Val Leu Met Leu Cys Gln Ala Phe Gly Ile Ile Tyr Pro
 260 265 270
 Ser Phe His Ser Phe Ile Leu Ile Trp Gly Asn Lys Thr Leu Lys Gln
 275 280 285
 Thr Phe Leu Ser Val Leu Trp Gln Val Thr Cys Trp Ala Lys Gly Gln
 290 295 300
 Asn Gln Ser Thr Pro
 305

<210> 182

<211> 930

<212> DNA

<213> Homo sapiens

<400> 182

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atctcttttg ctgaccagat tctcactgct ctggcggtct ccagagttgg tttgctctgg	180
gtattattat taaattggta ttcaactgtg tttaatccag ctttttatag tgtagaagta	240
agaactactg cttataatgt ctgggcagta accggccatt tcagcaactg gcttgctact	300
agcctcagca tattttattt gctcaagatt gccaatctct ccaaccttat ttttcttcac	360

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aacttgactt ggaagatcaa attgaggagt gcagtgtacc tttcagatgc gactgtaacc 540
acgctaggaa acttagtgcc cttcactctg accctgctat gttttttgct gttaatctgt 600
tctctgtgta aacatctcaa gaagatgcag ctccatggta aaggatctca agatcccagc 660
accaaggtcc acataaaagc tttgcaaact gtgatctttt tctctttggt atgtgccgtt 720
tactttctgt ccataatgat atcagtttgg agttttggga gtctggaaaa caaacctgtc 780
ttcatgttct gcaaagctat tagattcagc tacccttcaa tccaccatt catcctgatt 840
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gtgaaaggag agaagccttc atctccatag 930

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<210> 183
<211> 309
<212> PRT
<213> Homo sapiens

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<400> 183
Met Thr Thr Phe Ile Pro Ile Ile Phe Ser Ser Val Val Val Val Leu
1          5          10          15

Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
20          25          30

Ile Glu Arg Val Lys Arg Gln Lys Ile Ser Phe Ala Asp Gln Ile Leu
35          40          45

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Leu Leu
50          55          60

Asn Trp Tyr Ser Thr Val Phe Asn Pro Ala Phe Tyr Ser Val Glu Val
65          70          75          80

Arg Thr Thr Ala Tyr Asn Val Trp Ala Val Thr Gly His Phe Ser Asn
85          90          95

Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
100         105         110

Phe Ser Asn Leu Ile Phe Leu His Leu Lys Arg Arg Val Lys Ser Val
115         120         125

Ile Leu Val Met Leu Leu Gly Pro Leu Leu Phe Leu Ala Cys Gln Leu
130         135         140

Phe Val Ile Asn Met Lys Glu Ile Val Arg Thr Lys Glu Tyr Glu Gly
145         150         155         160

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atctcctcag	ctgagcaaat	tctcactgct	ctggtggtct	ccagaattgg	tttactctgg	180
gtcatgttat	tcctttggta	tgcaactgtg	tttaattctg	ctttatatgg	tttagaagta	240
agaattgttg	cttctaattgc	ctgggctgta	acgaaccatt	tcagcatgtg	gcttgctgct	300
agcctcagca	tattttgttt	gctcaagatt	gccaatctct	ccaaccttat	ttctctccac	360
ctaaagaaga	gaattaagag	tgttgttctg	gtgatactgt	tggggccctt	ggatattctg	420
atttgtaatc	ttgctgtgat	aacctaggat	gagagagtgt	ggacaaaaga	atatgaagga	480
aatgtgactt	ggaagatcaa	attgaggaat	gcaatacacc	tttcaagctt	gactgtaact	540
actctagcaa	acctcatacc	ctttactctg	agcctaatat	gttttctgct	gttaatctgt	600
tctcttttga	aacatctcaa	gaagatgcgg	ctccatagca	aaggatctca	agatcccagc	660

accaaggtcc atataaaagc tttgcaaact gtgacctcct tcctcatggt atttgccatt 720
 tactttctgt gtataatcac atcaacttgg aatccttagga cacagcagag caaacttgta 780
 ctctgtcttt gccaaactgt tgcaatcatg tctccttcat tccactcatt catcctgatt 840
 atgggaagta ggaagctaaa acagaccttt ctttcagttt tgtggcagat gacacgctga 900

<210> 185
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 185
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 1 5 10 15
 Phe Val Leu Gly Asn Val Ala Asn Gly Phe Ile Ala Leu Val Asn Val
 20 25 30
 Ile Asp Trp Val Asn Thr Arg Lys Ile Ser Ser Ala Glu Gln Ile Leu
 35 40 45
 Thr Ala Leu Val Val Ser Arg Ile Gly Leu Leu Trp Val Met Leu Phe
 50 55 60
 Leu Trp Tyr Ala Thr Val Phe Asn Ser Ala Leu Tyr Gly Leu Glu Val
 65 70 75 80
 Arg Ile Val Ala Ser Asn Ala Trp Ala Val Thr Asn His Phe Ser Met
 85 90 95
 Trp Leu Ala Ala Ser Leu Ser Ile Phe Cys Leu Leu Lys Ile Ala Asn
 100 105 110
 Phe Ser Asn Leu Ile Ser Leu His Leu Lys Lys Arg Ile Lys Ser Val
 115 120 125
 Val Leu Val Ile Leu Leu Gly Pro Leu Val Phe Leu Ile Cys Asn Leu
 130 135 140
 Ala Val Ile Thr Met Asp Glu Arg Val Trp Thr Lys Glu Tyr Glu Gly
 145 150 155 160
 Asn Val Thr Trp Lys Ile Lys Leu Arg Asn Ala Ile His Leu Ser Ser
 165 170 175
 Leu Thr Val Thr Thr Leu Ala Asn Leu Ile Pro Phe Thr Leu Ser Leu
 180 185 190
 Ile Cys Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
 195 200 205
 Met Arg Leu His Ser Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
 210 215 220

Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Met Leu Phe Ala Ile
 225 230 235 240
 Tyr Phe Leu Cys Ile Ile Thr Ser Thr Trp Asn Leu Arg Thr Gln Gln
 245 250 255
 Ser Lys Leu Val Leu Leu Leu Cys Gln Thr Val Ala Ile Met Tyr Pro
 260 265 270
 Ser Phe His Ser Phe Ile Leu Ile Met Gly Ser Arg Lys Leu Lys Gln
 275 280 285
 Thr Phe Leu Ser Val Leu Trp Gln Met Thr Arg
 290 295

<210> 186
 <211> 900
 <212> DNA
 <213> Homo sapiens

<400> 186
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 atctcctcag ctgaccaaatt tctcactgct ctggcggtct ccagaattgg tttgctctgg 180
 gcattattat taaattggta tttaactgtg ttgaatccag ctttttatag tgtagaatta 240
 agaattactt cttataatgc ctgggttgta accaaccatt tcagcatgtg gcttgctgct 300
 aacctcagca tattttattt gctcaagatt gccaatctct ccaaccttct ttttcttcat 360
 ttaaagagga gagttaggag tgtcattctg gtgatactgt tggggacttt gatatttttg 420
 gtttgtcatc ttcttgtggc aaacatggat gagagtatgt gggcagaaga atatgaagga 480
 aacatgactg ggaagatgaa attgaggaat acagtacatc tttcatattt gactgtaact 540
 accctatgga gcttcatacc ctttactctg tccttgatat cttttctgat gctaattctgt 600
 tctctgtgta aacatctcaa gaagatgcag ctccatggag aaggatcgca agatctcagc 660
 accaaggtcc acataaaagc tttgcaaact ctgatctcct tcctcttggt atgtgccatt 720
 ttctttctat tcctaactgt ttcggtttgg agtcctagga ggctgcggaa tgacccggtt 780
 gtcatggtta gcaaggctgt tggaacata tatcttgcac tcgactcatt catcctaatt 840
 tggagaacca agaagctaaa acacaccttt cttttgattt tgtgtcagat taggtgctga 900

<210> 187
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 187

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Met Ile Thr Phe Leu Tyr Ile Phe Phe Ser Ile Leu Ile Met Val Leu
1           5           10           15

Phe Val Leu Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Phe
20           25           30

Ile Asp Trp Val Lys Arg Lys Lys Ile Ser Ser Ala Asp Gln Ile Leu
35           40           45

Thr Ala Leu Ala Val Ser Arg Ile Gly Leu Leu Trp Ala Leu Leu Leu
50           55           60

Asn Trp Tyr Leu Thr Val Leu Asn Pro Ala Phe Tyr Ser Val Glu Leu
65           70           75           80

Arg Ile Thr Ser Tyr Asn Ala Trp Val Val Thr Asn His Phe Ser Met
85           90           95

Trp Leu Ala Ala Asn Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
100          105          110

Phe Ser Asn Leu Leu Phe Leu His Leu Lys Arg Arg Val Arg Ser Val
115          120          125

Ile Leu Val Ile Leu Leu Gly Thr Leu Ile Phe Leu Val Cys His Leu
130          135          140

Leu Val Ala Asn Met Asp Glu Ser Met Trp Ala Glu Glu Tyr Glu Gly
145          150          155          160

Asn Met Thr Gly Lys Met Lys Leu Arg Asn Thr Val His Leu Ser Tyr
165          170          175

Leu Thr Val Thr Thr Leu Trp Ser Phe Ile Pro Phe Thr Leu Ser Leu
180          185          190

Ile Ser Phe Leu Met Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
195          200          205

Met Gln Leu His Gly Glu Gly Ser Gln Asp Leu Ser Thr Lys Val His
210          215          220

Ile Lys Ala Leu Gln Thr Leu Ile Ser Phe Leu Leu Leu Cys Ala Ile
225          230          235          240

Phe Phe Leu Phe Leu Ile Val Ser Val Trp Ser Pro Arg Arg Leu Arg
245          250          255

Asn Asp Pro Val Val Met Val Ser Lys Ala Val Gly Asn Ile Tyr Leu
260          265          270

Ala Phe Asp Ser Phe Ile Leu Ile Trp Arg Thr Lys Lys Leu Lys His
275          280          285

Thr Phe Leu Leu Ile Leu Cys Gln Ile Arg Cys
290          295

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<210> 188
 <211> 924
 <212> DNA
 <213> Homo sapiens

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 ttgctgcctt tggatatgat cctcattagc ttgggtgcct cccgcttctg cctgcagttg 180
 gttgggacgg tgcacaactt ctactactct gcccagaagg tcgagtactc tgggggtctc 240
 ggccgacagt tcttccatct aactggcac ttctgaact cagccacctt ctggttttgc 300
 agctggctca gtgtcctggt ctgtgtgaag attgctaaca tcacacactc caccttctctg 360
 tggctgaagt ggaggttccc aggggtgggtg ccctggctcc tgttgggtctc tgtcctgac 420
 tccttcatca taacctgtct gtttttttgg gtgaactacc ctgtatatca agaattttta 480
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 atgctgttaa ttaattctct gaggaggcat actcagagaa tgcagcacia cgggcacagc 660
 ctgcaggacc ccagcaccca ggctcacacc agagctctga agtccctcat ctcttctctc 720
 attctttatg ctctgtcctt tctgtccctg atcattgatg ccgcaaaatt tatctccatg 780
 cagaacgact tttactggcc atggcaaatt gcagtctacc tgtgcatatc tgtccatccc 840
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 gcaaggggct tctgggtggc ctag 924

<210> 189
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Gln Ala Ala Leu Thr Ala Phe Phe Val Leu Leu Phe Ser Leu Leu
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 Ser Leu Leu Gly Ile Ala Ala Asn Gly Phe Ile Val Leu Val Leu Gly
 20 25 30
 Arg Glu Trp Leu Arg Tyr Gly Arg Leu Leu Pro Leu Asp Met Ile Leu
 35 40 45
 Ile Ser Leu Gly Ala Ser Arg Phe Cys Leu Gln Leu Val Gly Thr Val
 50 55 60

His Asn Phe Tyr Tyr Ser Ala Gln Lys Val Glu Tyr Ser Gly Gly Leu
 65 70 75 80
 Gly Arg Gln Phe Phe His Leu His Trp His Phe Leu Asn Ser Ala Thr
 85 90 95
 Phe Trp Phe Cys Ser Trp Leu Ser Val Leu Phe Cys Val Lys Ile Ala
 100 105 110
 Asn Ile Thr His Ser Thr Phe Leu Trp Leu Lys Trp Arg Phe Pro Gly
 115 120 125
 Trp Val Pro Trp Leu Leu Leu Gly Ser Val Leu Ile Ser Phe Ile Ile
 130 135 140
 Thr Leu Leu Phe Phe Trp Val Asn Tyr Pro Val Tyr Gln Glu Phe Leu
 145 150 155 160
 Ile Arg Lys Phe Ser Gly Asn Met Thr Tyr Lys Trp Asn Thr Arg Ile
 165 170 175
 Glu Thr Tyr Tyr Phe Pro Ser Leu Lys Leu Val Ile Trp Ser Ile Pro
 180 185 190
 Phe Ser Val Phe Leu Val Ser Ile Met Leu Leu Ile Asn Ser Leu Arg
 195 200 205
 Arg His Thr Gln Arg Met Gln His Asn Gly His Ser Leu Gln Asp Pro
 210 215 220
 Ser Thr Gln Ala His Thr Arg Ala Leu Lys Ser Leu Ile Ser Phe Leu
 225 230 235 240
 Ile Leu Tyr Ala Leu Ser Phe Leu Ser Leu Ile Ile Asp Ala Ala Lys
 245 250 255
 Phe Ile Ser Met Gln Asn Asp Phe Tyr Trp Pro Trp Gln Ile Ala Val
 260 265 270
 Tyr Leu Cys Ile Ser Val His Pro Phe Ile Leu Ile Phe Ser Asn Leu
 275 280 285
 Lys Leu Arg Ser Val Phe Ser Gln Leu Leu Leu Leu Ala Arg Gly Phe
 290 295 300
 Trp Val Ala
 305

<210> 190

<211> 930

<212> DNA

<213> Homo sapiens

<400> 190

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atctcttttg ctgaccaa at tctactgct ctggcagtct ccagagttgg ttactctgg 180
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agaattactg cttacaatgt ctgggcagta atcaaccatt tcagcaactg gcttgctact 300
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gtttgtcatc tttttgtgat aaacatgaat cagattatat ggacaaaaga atatgaagga 480
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<210> 191

<211> 309

<212> PRT

<213> Homo sapiens

<400> 191

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Met Ile Thr Phe Leu Pro Ile Ile Phe Ser Ile Leu Ile Val Val Thr
1          5          10          15

Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
20          25          30

Ile Glu Trp Phe Lys Arg Gln Lys Ile Ser Phe Ala Asp Gln Ile Leu
35          40          45

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Val Leu
50          55          60

Asn Trp Tyr Ala Thr Glu Leu Asn Pro Ala Phe Asn Ser Ile Glu Val
65          70          75          80

Arg Ile Thr Ala Tyr Asn Val Trp Ala Val Ile Asn His Phe Ser Asn
85          90          95

Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
100         105         110

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Phe Ser Asn Leu Ile Phe Leu His Leu Lys Arg Arg Val Lys Ser Val
 115 120 125
 Val Leu Val Ile Leu Leu Gly Pro Leu Leu Phe Leu Val Cys His Leu
 130 135 140
 Phe Val Ile Asn Met Asn Gln Ile Ile Trp Thr Lys Glu Tyr Glu Gly
 145 150 155 160
 Asn Met Thr Trp Lys Ile Lys Leu Arg Ser Ala Met Tyr Leu Ser Asn
 165 170 175
 Thr Thr Val Thr Ile Leu Ala Asn Leu Val Pro Phe Thr Leu Thr Leu
 180 185 190
 Ile Ser Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
 195 200 205
 Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Met Lys Val His
 210 215 220
 Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Leu Ile Cys Ala Ile
 225 230 235 240
 Tyr Phe Leu Ser Ile Ile Met Ser Val Trp Ser Phe Glu Ser Leu Glu
 245 250 255
 Asn Lys Pro Val Phe Met Phe Cys Glu Ala Ile Ala Phe Ser Tyr Pro
 260 265 270
 Ser Thr His Pro Phe Ile Leu Ile Trp Gly Asn Lys Lys Leu Lys Gln
 275 280 285
 Thr Phe Leu Ser Val Leu Trp His Val Arg Tyr Trp Val Lys Gly Glu
 290 295 300
 Lys Pro Ser Ser Ser
 305

<210> 192

<211> 930

<212> DNA

<213> Homo sapiens

<400> 192

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 atctcctcag ctgaccaaatt cctcactgct ctggtggtct ccagaattgg ttactctgg 180
 gtcataattat tacattggta tgcaaatgtg tttaattcag ctttatatag ttcagaagta 240
 ggagctgttg cttctaatat ctcagcaata atcaaccatt tcagcatctg gcttgctgct 300
 agcctcagca tattttattt gctcaagatt gccaatctt ccaaccttat ttttctccac 360

ctaaagaaga gaattaggag tgttggtctg gtgatactgt tgggtccctt ggtatTTTTg	420
atTTgtaatc ttgctgtgat aacctggat gacagtgtgt ggacaaaaga atatgaagga	480
aatgtgactt ggaagatcaa attgaggaat gcaatacacc tttcaaactt gactgtaagc	540
acactagcaa acctcatacc cttcattctg accctaatat gttttctgct gttaatctgt	600
tctctgcata aacatctcaa gaagatgcag ctccatggca aaggatctca agatctcagc	660
accaaggtcc acataaaagc tttgcaaact gtgatctcct tcctcatggt atatgccatt	720
tactttctgt atctaatacac attaacctgg aatctttgaa cacagcagaa caaacttgta	780
ttcctgcttt gccaaactct tggaatcatg tatccttcatt tccactcatt cttcctgatt	840
atgggaagca ggaaactaaa acagacgttt ctttcagttt tatgtcaggt cacatgctta	900
gtgaaaggac agcaaccctc aactccatag	930

<210> 193

<211> 885

<212> DNA

<213> Homo sapiens

<400> 193

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aatgttgcca atggcttcatt agctctagta ggtgtccttg agtgggttaa gacacaaaag	120
atctcatcag ctgaccaaatt ttctcactgc tctggtggtg tccagagttg gtttactctg	180
ggatcatatta ttacattggt atgcaactgt gtttaatttg gcttcacata gattagaagt	240
aagaatTTTT ggttctaattg tctcagcaat aaccaagcat ttcagcatct ggggtgttact	300
agcctcagca tatttcatTT gctcaagact gccaatTTct ccaaccttat ttttctccac	360
ctaaagaaaa ggattaagaa tgttggtttg gtgatgctgt tggggccctt ggtatTTTTc	420
atTTgtaatc ttgctctgat aaccacgggt gagagtgtgt ggacaaaaga atatgaagga	480
aatttgtctt ggatgatcaa attgaggaat gcaatacagc tttcaaactt gactgtaacc	540
atgccagcaa acgtcacacc ctgcactctg acactaatat cttttctgct gttaatctat	600
tctccatgta aacatgtcaa gaagatgcag ctccatggca aaggatctca acatctcagc	660
accaaggtgc acataaaagc tttgcaaact gtgatctcct tccttatggt atttgccatt	720
tactttctgt gtctaatacac atcaacttgg aatcctagga ctcagcagag caaacttgta	780
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 <212> DNA
 <213> Mus musculus

<400> 194
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 acgttcctga tcctgcagac cctcttgatg tgcacagggc tgtccagact cggctctgcag 180
 ataatgctca tgacccaaag cttcttctct gtgttctttc catactctta tgaggaaaat 240
 atttatagtt cagatataat gttcgtctgg atgttcttca gctcgattgg cctctggttt 300
 gccacatgtc tctctgtctt ttactgcctc aagatttcag gcttcactcc accctggttt 360
 ctttggctga aattcagaat ttcaaagctc atattttggc tgcttctggg cagcttgctg 420
 gcctctctgg gcaactgcaac tgtgtgcac gaggtaggtt tccctttaat tgaggatggc 480
 tatgtcctga gaaacgcagg actaaatgat agtaatgcc aactagtgag aaataatgac 540
 ttgctcctca tcaacctgat cctcctgctt cccctgtctg tgtttgtgat gtgcacctct 600
 atgttatttg tttctcttta caagcacatg cactggatgc aaagcgaatc tcacaagctg 660
 tcaagtgcc gaaccgaagc tcatataaat gcattaaaga cagtgacaac attcttttgt 720
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 agtcatcagt tcttcgtggg gaaggaaatc atggcagcat atcccgcgg ccactctgtc 840
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 aaggaagagt ga 912

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 <211> 303
 <212> PRT
 <213> Mus musculus

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 Glu Phe Leu Ile Gly Thr Thr Val Asn Gly Phe Leu Ile Ile Val Asn
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 Cys Tyr Asp Leu Phe Lys Ser Arg Thr Phe Leu Ile Leu Gln Thr Leu
 35 40 45
 Leu Met Cys Thr Gly Leu Ser Arg Leu Gly Leu Gln Ile Met Leu Met
 50 55 60

Thr Gln Ser Phe Phe Ser Val Phe Phe Pro Tyr Ser Tyr Glu Glu Asn
 65 70 75 80
 Ile Tyr Ser Ser Asp Ile Met Phe Val Trp Met Phe Phe Ser Ser Ile
 85 90 95
 Gly Leu Trp Phe Ala Thr Cys Leu Ser Val Phe Tyr Cys Leu Lys Ile
 100 105 110
 Ser Gly Phe Thr Pro Pro Trp Phe Leu Trp Leu Lys Phe Arg Ile Ser
 115 120 125
 Lys Leu Ile Phe Trp Leu Leu Leu Gly Ser Leu Leu Ala Ser Leu Gly
 130 135 140
 Thr Ala Thr Val Cys Ile Glu Val Gly Phe Pro Leu Ile Glu Asp Gly
 145 150 155 160
 Tyr Val Leu Arg Asn Ala Gly Leu Asn Asp Ser Asn Ala Lys Leu Val
 165 170 175
 Arg Asn Asn Asp Leu Leu Leu Ile Asn Leu Ile Leu Leu Leu Pro Leu
 180 185 190
 Ser Val Phe Val Met Cys Thr Ser Met Leu Phe Val Ser Leu Tyr Lys
 195 200 205
 His Met His Trp Met Gln Ser Glu Ser His Leu Lys Ser Ser Ala Arg
 210 215 220
 Thr Glu Ala His Ile Asn Ala Leu Lys Thr Val Thr Thr Phe Phe Cys
 225 230 235 240
 Phe Phe Val Ser Tyr Phe Ala Ala Phe Met Ala Asn Met Thr Phe Arg
 245 250 255
 Ile Pro Tyr Arg Ser His Gln Phe Phe Val Val Lys Glu Ile Met Ala
 260 265 270
 Ala Tyr Pro Ala Gly His Ser Val Ile Ile Val Leu Ser Asn Ser Lys
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 Phe Lys Asp Leu Phe Arg Arg Met Ile Cys Leu Gln Lys Glu Glu
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<210> 196

<211> 858

<212> PRT

<213> Mus musculus

<400> 196

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Gly	Asp	Tyr	Ile	Leu	Gly	Gly	Leu	Phe	Pro	Leu	Gly	Thr	Thr	Glu	Glu	35	40	45
Ala	Thr	Leu	Asn	Gln	Arg	Thr	Gln	Pro	Asn	Gly	Ile	Leu	Cys	Thr	Arg	50	55	60
Phe	Ser	Pro	Leu	Gly	Leu	Phe	Leu	Ala	Met	Ala	Met	Lys	Met	Ala	Val	65	70	75
Glu	Glu	Ile	Asn	Asn	Gly	Ser	Ala	Leu	Leu	Pro	Gly	Leu	Arg	Leu	Gly	85	90	95
Tyr	Asp	Leu	Phe	Asp	Thr	Cys	Ser	Glu	Pro	Val	Val	Thr	Met	Lys	Pro	100	105	110
Ser	Leu	Met	Phe	Met	Ala	Lys	Val	Gly	Ser	Gln	Ser	Ile	Ala	Ala	Tyr	115	120	125
Cys	Asn	Tyr	Thr	Gln	Tyr	Gln	Pro	Arg	Val	Leu	Ala	Val	Ile	Gly	Pro	130	135	140
His	Ser	Ser	Glu	Leu	Ala	Leu	Ile	Thr	Gly	Lys	Phe	Phe	Ser	Phe	Phe	145	150	155
Leu	Met	Pro	Gln	Val	Ser	Tyr	Ser	Ala	Ser	Met	Asp	Arg	Leu	Ser	Asp	165	170	175
Arg	Glu	Thr	Phe	Pro	Ser	Phe	Phe	Arg	Thr	Val	Pro	Ser	Asp	Arg	Val	180	185	190
Gln	Leu	Gln	Ala	Val	Val	Thr	Leu	Leu	Gln	Asn	Phe	Ser	Trp	Asn	Trp	195	200	205
Val	Ala	Ala	Leu	Gly	Ser	Asp	Asp	Asp	Tyr	Gly	Arg	Glu	Gly	Leu	Ser	210	215	220
Ile	Phe	Ser	Gly	Leu	Ala	Asn	Ser	Arg	Gly	Ile	Cys	Ile	Ala	His	Glu	225	230	235
Gly	Leu	Val	Pro	Gln	His	Asp	Thr	Ser	Gly	Gln	Gln	Leu	Gly	Lys	Val	245	250	255
Val	Asp	Val	Leu	Arg	Gln	Val	Asn	Gln	Ser	Lys	Val	Gln	Val	Val	Val	260	265	270
Leu	Phe	Ala	Ser	Ala	Arg	Ala	Val	Tyr	Ser	Leu	Phe	Ser	Tyr	Ser	Ile	275	280	285
Leu	His	Asp	Leu	Ser	Pro	Lys	Val	Trp	Val	Ala	Ser	Glu	Ser	Trp	Leu	290	295	300
Thr	Ser	Asp	Leu	Val	Met	Thr	Leu	Pro	Asn	Ile	Ala	Arg	Val	Gly	Thr	305	310	315
Val	Leu	Gly	Phe	Leu	Gln	Arg	Gly	Ala	Leu	Leu	Pro	Glu	Phe	Ser	His	325	330	335

Tyr	Val	Glu	Thr	Arg	Leu	Ala	Leu	Ala	Ala	Asp	Pro	Thr	Phe	Cys	Ala		
			340					345					350				
Ser	Leu	Lys	Ala	Glu	Leu	Asp	Leu	Glu	Glu	Arg	Val	Met	Gly	Pro	Arg		
		355					360					365					
Cys	Ser	Gln	Cys	Asp	Tyr	Ile	Met	Leu	Gln	Asn	Leu	Ser	Ser	Gly	Leu		
		370				375					380						
Met	Gln	Asn	Leu	Ser	Ala	Gly	Gln	Leu	His	His	Gln	Ile	Phe	Ala	Thr		
385					390					395					400		
Tyr	Ala	Ala	Val	Tyr	Ser	Val	Ala	Gln	Ala	Leu	His	Asn	Thr	Leu	Gln		
				405					410					415			
Cys	Asn	Val	Ser	His	Cys	His	Thr	Ser	Glu	Pro	Val	Gln	Pro	Trp	Gln		
			420					425					430				
Leu	Leu	Glu	Asn	Met	Tyr	Asn	Met	Ser	Phe	Arg	Ala	Arg	Asp	Leu	Thr		
		435					440					445					
Leu	Gln	Phe	Asp	Ala	Lys	Gly	Ser	Val	Asp	Met	Glu	Tyr	Asp	Leu	Lys		
	450					455					460						
Met	Trp	Val	Trp	Gln	Ser	Pro	Thr	Pro	Val	Leu	His	Thr	Val	Gly	Thr		
465					470					475					480		
Phe	Asn	Gly	Thr	Leu	Gln	Leu	Gln	His	Ser	Lys	Met	Tyr	Trp	Pro	Gly		
			485						490					495			
Asn	Gln	Val	Pro	Val	Ser	Gln	Cys	Ser	Arg	Gln	Cys	Lys	Asp	Gly	Gln		
			500					505					510				
Val	Arg	Arg	Val	Lys	Gly	Phe	His	Ser	Cys	Cys	Tyr	Asp	Cys	Val	Asp		
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Cys	Lys	Ala	Gly	Ser	Tyr	Arg	Lys	His	Pro	Asp	Asp	Phe	Thr	Cys	Thr		
	530					535					540						
Pro	Cys	Gly	Lys	Asp	Gln	Trp	Ser	Pro	Glu	Lys	Ser	Thr	Thr	Cys	Leu		
545					550					555					560		
Pro	Arg	Arg	Pro	Lys	Phe	Leu	Ala	Trp	Gly	Glu	Pro	Ala	Val	Leu	Ser		
				565					570					575			
Leu	Leu	Leu	Leu	Leu	Cys	Leu	Val	Leu	Gly	Leu	Thr	Leu	Ala	Ala	Leu		
			580					585					590				
Gly	Leu	Phe	Val	His	Tyr	Trp	Asp	Ser	Pro	Leu	Val	Gln	Ala	Ser	Gly		
		595					600					605					
Gly	Ser	Leu	Phe	Cys	Phe	Gly	Leu	Ile	Cys	Leu	Gly	Leu	Phe	Cys	Leu		
	610					615					620						
Ser	Val	Leu	Leu	Phe	Pro	Gly	Arg	Pro	Arg	Ser	Ala	Ser	Cys	Leu	Ala		
625					630					635					640		

Gln	Gln	Pro	Met	Ala	His	Leu	Pro	Leu	Thr	Gly	Cys	Leu	Ser	Thr	Leu
				645					650					655	
Phe	Leu	Gln	Ala	Ala	Glu	Ile	Phe	Val	Glu	Ser	Glu	Leu	Pro	Leu	Ser
				660				665					670		
Trp	Ala	Asn	Trp	Leu	Cys	Ser	Tyr	Leu	Arg	Gly	Pro	Trp	Ala	Trp	Leu
				675			680					685			
Val	Val	Leu	Leu	Ala	Thr	Leu	Val	Glu	Ala	Ala	Leu	Cys	Ala	Trp	Tyr
				690		695					700				
Leu	Met	Ala	Phe	Pro	Pro	Glu	Val	Val	Thr	Asp	Trp	Gln	Val	Leu	Pro
705					710					715					720
Thr	Glu	Val	Leu	Glu	His	Cys	Arg	Met	Arg	Ser	Trp	Val	Ser	Leu	Gly
				725					730					735	
Leu	Val	His	Ile	Thr	Asn	Ala	Val	Leu	Ala	Phe	Leu	Cys	Phe	Leu	Gly
				740				745					750		
Thr	Phe	Leu	Val	Gln	Ser	Gln	Pro	Gly	Arg	Tyr	Asn	Arg	Ala	Arg	Gly
				755			760					765			
Leu	Thr	Phe	Ala	Met	Leu	Ala	Tyr	Phe	Ile	Ile	Trp	Val	Ser	Phe	Val
				770		775					780				
Pro	Leu	Leu	Ala	Asn	Val	Gln	Val	Ala	Tyr	Gln	Pro	Ala	Val	Gln	Met
785					790					795					800
Gly	Ala	Ile	Leu	Phe	Cys	Ala	Leu	Gly	Ile	Leu	Ala	Thr	Phe	His	Leu
				805					810					815	
Pro	Lys	Cys	Tyr	Val	Leu	Leu	Trp	Leu	Pro	Glu	Leu	Asn	Thr	Gln	Glu
				820				825					830		
Phe	Phe	Leu	Gly	Arg	Ser	Pro	Lys	Glu	Ala	Ser	Asp	Gly	Asn	Sér	Gly
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Ser	Ser	Glu	Ala	Thr	Arg	Gly	His	Ser	Glu						
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<210> 197
<211> 841
<212> PRT
<213> Homo sapiens
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<400> 197
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Cys Cys Trp Ala Phe Ala Cys His Ser Thr Glu Ser Ser Pro Asp Phe
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Thr Leu Pro Gly Asp Tyr Leu Leu Ala Gly Leu Phe Pro Leu His Ser
      35             40             45

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Gly	Cys	Leu	Gln	Val	Arg	His	Arg	Pro	Glu	Val	Thr	Leu	Cys	Asp	Arg	50	55	60
Ser	Cys	Ser	Phe	Asn	Glu	His	Gly	Tyr	His	Leu	Phe	Gln	Ala	Met	Arg	65	70	75
Leu	Gly	Val	Glu	Glu	Ile	Asn	Asn	Ser	Thr	Ala	Leu	Leu	Pro	Asn	Ile	85	90	95
Thr	Leu	Gly	Tyr	Gln	Leu	Tyr	Asp	Val	Cys	Ser	Asp	Ser	Ala	Asn	Val	100	105	110
Tyr	Ala	Thr	Leu	Arg	Val	Leu	Ser	Leu	Pro	Gly	Gln	His	His	Ile	Glu	115	120	125
Leu	Gln	Gly	Asp	Leu	Leu	His	Tyr	Ser	Pro	Thr	Val	Leu	Ala	Val	Ile	130	135	140
Gly	Pro	Asp	Ser	Thr	Asn	Arg	Ala	Ala	Thr	Thr	Ala	Ala	Leu	Leu	Ser	145	150	155
Pro	Phe	Leu	Val	Pro	Met	Ile	Ser	Tyr	Ala	Ala	Ser	Ser	Glu	Thr	Leu	165	170	175
Ser	Val	Lys	Arg	Gln	Tyr	Pro	Ser	Phe	Leu	Arg	Thr	Ile	Pro	Asn	Asp	180	185	190
Lys	Tyr	Gln	Val	Glu	Thr	Met	Val	Leu	Leu	Leu	Gln	Lys	Phe	Gly	Trp	195	200	205
Thr	Trp	Ile	Ser	Leu	Val	Gly	Ser	Ser	Asp	Asp	Tyr	Gly	Gln	Leu	Gly	210	215	220
Val	Gln	Ala	Leu	Glu	Asn	Gln	Ala	Thr	Gly	Gln	Gly	Ile	Cys	Ile	Ala	225	230	235
Phe	Lys	Asp	Ile	Met	Pro	Phe	Ser	Ala	Gln	Val	Gly	Asp	Glu	Arg	Met	245	250	255
Gln	Cys	Leu	Met	Arg	His	Leu	Ala	Gln	Ala	Gly	Ala	Thr	Val	Val	Val	260	265	270
Val	Phe	Ser	Ser	Arg	Gln	Leu	Ala	Arg	Val	Phe	Phe	Glu	Ser	Val	Val	275	280	285
Leu	Thr	Asn	Leu	Thr	Gly	Lys	Val	Trp	Val	Ala	Ser	Glu	Ala	Trp	Ala	290	295	300
Leu	Ser	Arg	His	Ile	Thr	Gly	Val	Pro	Gly	Ile	Gln	Arg	Ile	Gly	Met	305	310	315
Val	Leu	Gly	Val	Ala	Ile	Gln	Lys	Arg	Ala	Val	Pro	Gly	Leu	Lys	Ala	325	330	335
Phe	Glu	Glu	Ala	Tyr	Ala	Arg	Ala	Asp	Lys	Lys	Ala	Pro	Arg	Pro	Cys	340	345	350

His	Lys	Gly	Ser	Trp	Cys	Ser	Ser	Asn	Gln	Leu	Cys	Arg	Glu	Cys	Gln
		355					360					365			
Ala	Phe	Met	Ala	His	Thr	Met	Pro	Lys	Leu	Lys	Ala	Phe	Ser	Met	Ser
		370					375					380			
Ser	Ala	Tyr	Asn	Ala	Tyr	Arg	Ala	Val	Tyr	Ala	Val	Ala	His	Gly	Leu
385					390					395					
His	Gln	Leu	Leu	Gly	Cys	Ala	Ser	Gly	Ala	Cys	Ser	Arg	Gly	Arg	Val
				405					410					415	
Tyr	Pro	Trp	Gln	Leu	Leu	Glu	Gln	Ile	His	Lys	Val	His	Phe	Leu	Leu
				420					425					430	
His	Lys	Asp	Thr	Val	Ala	Phe	Asn	Asp	Asn	Arg	Asp	Pro	Leu	Ser	Ser
		435					440					445			
Tyr	Asn	Ile	Ile	Ala	Trp	Asp	Trp	Asn	Gly	Pro	Lys	Trp	Thr	Phe	Thr
		450					455					460			
Val	Leu	Gly	Ser	Ser	Thr	Trp	Ser	Pro	Val	Gln	Leu	Asn	Ile	Asn	Glu
465					470					475					
Thr	Lys	Ile	Gln	Trp	His	Gly	Lys	Asp	Asn	Gln	Val	Pro	Lys	Ser	Val
				485					490					495	
Cys	Ser	Ser	Asp	Cys	Leu	Glu	Gly	His	Gln	Arg	Val	Val	Thr	Gly	Phe
				500					505					510	
His	His	Cys	Cys	Phe	Glu	Cys	Val	Pro	Cys	Gly	Ala	Gly	Thr	Phe	Leu
		515					520					525			
Asn	Lys	Ser	Asp	Leu	Tyr	Arg	Cys	Gln	Pro	Cys	Gly	Lys	Glu	Glu	Trp
		530					535					540			
Ala	Pro	Glu	Gly	Ser	Gln	Thr	Cys	Phe	Pro	Arg	Thr	Val	Val	Phe	Leu
545					550					555					
Ala	Leu	Arg	Glu	His	Thr	Ser	Trp	Val	Leu	Leu	Ala	Ala	Asn	Thr	Leu
				565					570					575	
Leu	Leu	Leu	Leu	Leu	Leu	Gly	Thr	Ala	Gly	Leu	Phe	Ala	Trp	His	Leu
				580					585					590	
Asp	Thr	Pro	Val	Val	Arg	Ser	Ala	Gly	Gly	Arg	Leu	Cys	Phe	Leu	Met
		595					600					605			
Leu	Gly	Ser	Leu	Ala	Ala	Gly	Ser	Gly	Ser	Leu	Tyr	Gly	Phe	Phe	Gly
		610					615					620			
Glu	Pro	Thr	Arg	Pro	Ala	Cys	Leu	Leu	Arg	Gln	Ala	Leu	Phe	Ala	Leu
625					630					635					
Gly	Phe	Thr	Ile	Phe	Leu	Ser	Cys	Leu	Thr	Val	Arg	Ser	Phe	Gln	Leu
				645					650					655	

Ile Ile Ile Phe Lys Phe Ser Thr Lys Val Pro Thr Phe Tyr His Ala
 660 665 670
 Trp Val Gln Asn His Gly Ala Gly Leu Phe Val Met Ile Ser Ser Ala
 675 680 685
 Ala Gln Leu Leu Ile Cys Leu Thr Trp Leu Val Val Trp Thr Pro Leu
 690 695 700
 Pro Ala Arg Glu Tyr Gln Arg Phe Pro His Leu Val Met Leu Glu Cys
 705 710 715 720
 Thr Glu Thr Asn Ser Leu Gly Phe Ile Leu Ala Phe Leu Tyr Asn Gly
 725 730 735
 Leu Leu Ser Ile Ser Ala Phe Ala Cys Ser Tyr Leu Gly Lys Asp Leu
 740 745 750
 Pro Glu Asn Tyr Asn Glu Ala Lys Cys Val Thr Phe Ser Leu Leu Phe
 755 760 765
 Asn Phe Val Ser Trp Ile Ala Phe Phe Thr Thr Ala Ser Val Tyr Asp
 770 775 780
 Gly Lys Tyr Leu Pro Ala Ala Asn Met Met Ala Gly Leu Ser Ser Leu
 785 790 795 800
 Ser Ser Gly Phe Gly Gly Tyr Phe Leu Pro Lys Cys Tyr Val Ile Leu
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 Cys Arg Pro Asp Leu Asn Ser Thr Glu His Phe Gln Ala Ser Ile Gln
 820 825 830
 Asp Tyr Thr Arg Arg Cys Gly Ser Thr
 835 840

<210> 198
 <211> 839
 <212> PRT
 <213> Homo sapiens

<400> 198
 Met Gly Pro Arg Ala Lys Thr Ile Cys Ser Leu Phe Phe Leu Leu Trp
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 Val Leu Ala Glu Pro Ala Glu Asn Ser Asp Phe Tyr Leu Pro Gly Asp
 20 25 30
 Tyr Leu Leu Gly Gly Leu Phe Ser Leu His Ala Asn Met Lys Gly Ile
 35 40 45
 Val His Leu Asn Phe Leu Gln Val Pro Met Cys Lys Glu Tyr Glu Val
 50 55 60
 Lys Val Ile Gly Tyr Asn Leu Met Gln Ala Met Arg Phe Ala Val Glu
 65 70 75 80

Glu	Ile	Asn	Asn	Asp	Ser	Ser	Leu	Leu	Pro	Gly	Val	Leu	Leu	Gly	Tyr	85	90	95	
Glu	Ile	Val	Asp	Val	Cys	Tyr	Ile	Ser	Asn	Asn	Val	Gln	Pro	Val	Leu	100	105	110	
Tyr	Phe	Leu	Ala	His	Glu	Asp	Asn	Leu	Leu	Pro	Ile	Gln	Glu	Asp	Tyr	115	120	125	
Ser	Asn	Tyr	Ile	Ser	Arg	Val	Val	Ala	Val	Ile	Gly	Pro	Asp	Asn	Ser	130	135	140	
Glu	Ser	Val	Met	Thr	Val	Ala	Asn	Phe	Leu	Ser	Leu	Phe	Leu	Leu	Pro	145	150	155	160
Gln	Ile	Thr	Tyr	Ser	Ala	Ile	Ser	Asp	Glu	Leu	Arg	Asp	Lys	Val	Arg	165	170	175	
Phe	Pro	Ala	Leu	Leu	Arg	Thr	Thr	Pro	Ser	Ala	Asp	His	His	Val	Glu	180	185	190	
Ala	Met	Val	Gln	Leu	Met	Leu	His	Phe	Arg	Trp	Asn	Trp	Ile	Ile	Val	195	200	205	
Leu	Val	Ser	Ser	Asp	Thr	Tyr	Gly	Arg	Asp	Asn	Gly	Gln	Leu	Leu	Gly	210	215	220	
Glu	Arg	Val	Ala	Arg	Arg	Asp	Ile	Cys	Ile	Ala	Phe	Gln	Glu	Thr	Leu	225	230	235	240
Pro	Thr	Leu	Gln	Pro	Asn	Gln	Asn	Met	Thr	Ser	Glu	Glu	Arg	Gln	Arg	245	250	255	
Leu	Val	Thr	Ile	Val	Asp	Lys	Leu	Gln	Gln	Ser	Thr	Ala	Arg	Val	Val	260	265	270	
Val	Val	Phe	Ser	Pro	Asp	Leu	Thr	Leu	Tyr	His	Phe	Phe	Asn	Glu	Val	275	280	285	
Leu	Arg	Gln	Asn	Phe	Thr	Gly	Ala	Val	Trp	Ile	Ala	Ser	Glu	Ser	Trp	290	295	300	
Ala	Ile	Asp	Pro	Val	Leu	His	Asn	Leu	Thr	Glu	Leu	Gly	His	Leu	Gly	305	310	315	320
Thr	Phe	Leu	Gly	Ile	Thr	Ile	Gln	Ser	Val	Pro	Ile	Pro	Gly	Phe	Ser	325	330	335	
Glu	Phe	Arg	Glu	Trp	Gly	Pro	Gln	Ala	Gly	Pro	Pro	Pro	Leu	Ser	Arg	340	345	350	
Thr	Ser	Gln	Ser	Tyr	Thr	Cys	Asn	Gln	Glu	Cys	Asp	Asn	Cys	Leu	Asn	355	360	365	
Ala	Thr	Leu	Ser	Phe	Asn	Thr	Ile	Leu	Arg	Leu	Ser	Gly	Glu	Arg	Val	370	375	380	

Val	Tyr	Ser	Val	Tyr	Ser	Ala	Val	Tyr	Ala	Val	Ala	His	Ala	Leu	His	385	390	395	400
Ser	Leu	Leu	Gly	Cys	Asp	Lys	Ser	Thr	Cys	Thr	Lys	Arg	Val	Val	Tyr		405	410	415
Pro	Trp	Gln	Leu	Leu	Glu	Glu	Ile	Trp	Lys	Val	Asn	Phe	Thr	Leu	Leu		420	425	430
Asp	His	Gln	Ile	Phe	Phe	Asp	Pro	Gln	Gly	Asp	Val	Ala	Leu	His	Leu		435	440	445
Glu	Ile	Val	Gln	Trp	Gln	Trp	Asp	Arg	Ser	Gln	Asn	Pro	Phe	Gln	Ser		450	455	460
Val	Ala	Ser	Tyr	Tyr	Pro	Leu	Gln	Arg	Gln	Leu	Lys	Asn	Ile	Gln	Asp		465	470	475
Ile	Ser	Trp	His	Thr	Val	Asn	Asn	Thr	Ile	Pro	Met	Ser	Met	Cys	Ser		485	490	495
Lys	Arg	Cys	Gln	Ser	Gly	Gln	Lys	Lys	Lys	Pro	Val	Gly	Ile	His	Val		500	505	510
Cys	Cys	Phe	Glu	Cys	Ile	Asp	Cys	Leu	Pro	Gly	Thr	Phe	Leu	Asn	His		515	520	525
Thr	Glu	Asp	Glu	Tyr	Glu	Cys	Gln	Ala	Cys	Pro	Asn	Asn	Glu	Trp	Ser		530	535	540
Tyr	Gln	Ser	Glu	Thr	Ser	Cys	Phe	Lys	Arg	Gln	Leu	Val	Phe	Leu	Glu		545	550	555
Trp	His	Glu	Ala	Pro	Thr	Ile	Ala	Val	Ala	Leu	Leu	Ala	Ala	Leu	Gly		565	570	575
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Pro	Lys	Val	Ser	Thr	Cys	Leu	Cys	Arg	Gln	Ala	Leu	Phe	Pro	Leu	Cys		625	630	635
Phe	Thr	Ile	Cys	Ile	Ser	Cys	Ile	Ala	Val	Arg	Ser	Phe	Gln	Ile	Val		645	650	655
Cys	Ala	Phe	Lys	Met	Ala	Ser	Arg	Phe	Pro	Arg	Ala	Tyr	Ser	Tyr	Trp		660	665	670
Val	Arg	Tyr	Gln	Gly	Pro	Tyr	Val	Ser	Met	Ala	Phe	Ile	Thr	Val	Leu		675	680	685

Lys Met Val Ile Val Val Ile Gly Met Leu Ala Thr Gly Leu Ser Pro
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 Arg Glu Thr Phe Pro Ser Phe Phe Arg Thr Val Pro Ser Asp Arg Val
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 Gln Leu Thr Ala Ala Ala Glu Leu Leu Gln Glu Phe Gly Trp Asn Trp
 195 200 205
 Val Ala Ala Leu Gly Ser Asp Asp Glu Tyr Gly Arg Gln Gly Leu Ser
 210 215 220
 Ile Phe Ser Ala Leu Ala Ala Ala Arg Gly Ile Cys Ile Ala His Glu
 225 230 235 240
 Gly Leu Val Pro Leu Pro Arg Ala Asp Asp Ser Arg Leu Gly Lys Val
 245 250 255
 Gln Asp Val Leu His Gln Val Asn Gln Ser Ser Val Gln Val Val Leu
 260 265 270
 Leu Phe Ala Ser Val His Ala Ala His Ala Leu Phe Asn Tyr Ser Ile
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 Ser Ser Arg Leu Ser Pro Lys Val Trp Val Ala Ser Glu Ala Trp Leu
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<212> PRT

<213> Fugu rubripes

<400> 204

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Leu Leu Leu Cys Leu Leu Cys Phe Ile Phe Ser Tyr Met Gly Lys Asp
          35          40          45

Leu Pro Lys Asn Tyr Asn Glu Ala Lys Ala Ile Thr Phe Cys Leu Leu
          50          55          60

Leu Leu Ile Leu Thr Trp Ile Ile Phe Thr Thr Ala Ser Leu Leu Tyr
65          70          75          80

Gln Gly Lys Tyr Ile His Ser Leu Asn Ala Leu Ala Val Leu Ser Ser
          85          90          95

Ile Tyr Ser Phe Leu Leu Trp Tyr Phe Leu Pro Lys Cys Tyr Ile Ile
          100          105          110

Ile Phe Gln Pro Gln Lys Asn Thr Gln Lys Tyr Phe Gln Gly Leu Ile
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Gln Asp Tyr Thr Lys Thr Ile Ser Gln
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Phe Phe Tyr Phe Glu Arg Pro Thr Glu Ala Phe Cys Ile Leu Arg Phe
          35          40          45

Met Pro Phe Leu Leu Phe Tyr Ala Val Cys Leu Ala Cys Phe Ala Val
          50          55          60

Arg Ser Phe Gln Ile Val Ile Ile Phe Lys Ile Ala Ala Lys Phe Pro
65          70          75          80

Arg Val His Ser Trp Trp Met Lys Tyr His Gly Gln Trp Leu Val Ile
          85          90          95

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Ser Met Thr Phe Val Leu Gln Ala Val Val Ile Val Ile Gly Phe Ser
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 Ser Asn Pro Pro Leu Pro Tyr Xaa Xaa Phe Val Ser Tyr Pro Asp Lys
 115 120 125
 Ile Ile Leu Gly Cys Asp Val Asn Leu Asn Met Ala Ser Thr Ser Phe
 130 135 140
 Phe Leu Leu Leu Leu Leu Cys Ile Leu Cys Phe Thr Phe Ser Tyr Met
 145 150 155 160
 Gly Lys Asp Leu Pro Lys Asn Tyr Asn Glu Ala Lys Ala Ile Thr Phe
 165 170 175
 Cys Leu Leu Leu Leu Ile Leu Thr Trp Ile Ile Phe Ala Thr Ala Phe
 180 185 190
 Met Leu Tyr His Gly Lys Tyr Ile His Thr Leu Asn Ala Leu Ala Val
 195 200 205
 Leu Ser Ser Ala Tyr Cys Phe Leu Leu Trp Tyr Phe Leu Pro Lys Cys
 210 215 220
 Tyr Ile Ile Ile Phe Gln Pro His Lys Asn Thr Gln Lys Tyr Phe Gln
 225 230 235 240
 Leu Ser

<210> 206
 <211> 165
 <212> PRT
 <213> Fugu rubripes

<400> 206
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 Gln Asp Leu Asp Phe Tyr Met Asp Ser Ile Val Leu Glu Cys Ser Asn
 35 40 45
 Thr Leu Ser Pro Gly Ser Phe Ile Glu Leu Cys Tyr Val Cys Val Leu
 50 55 60
 Ser Val Leu Cys Phe Phe Phe Ser Tyr Met Gly Lys Asp Leu Pro Ala
 65 70 75 80
 Asn Tyr Asn Glu Ala Lys Cys Val Thr Phe Ser Leu Met Val Tyr Met
 85 90 95
 Ile Ser Trp Ile Ser Phe Phe Thr Val Tyr Leu Ile Ser Arg Gly Pro
 100 105 110

Phe	Thr	Val	Ala	Ala	Tyr	Val	Cys	Ala	Thr	Leu	Val	Ser	Val	Leu	Ala
		115					120					125			
Phe	Phe	Gly	Gly	Tyr	Phe	Leu	Pro	Lys	Ile	Tyr	Ile	Ile	Val	Leu	Lys
	130					135					140				
Pro	Gln	Met	Asn	Thr	Thr	Ala	His	Phe	Gln	Asn	Cys	Ile	Gln	Met	Tyr
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Thr	Met	Ser	Lys	Gln											
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 <213> Tetraodon nigroviridis

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 35 40 45
 Asn Thr Pro Val Ala Lys Ser Ala Gly Gly Xaa Thr Cys Xaa Leu Lys
 50 55 60
 Leu Ala Ala Leu Thr Ala Ala Ala Met Ser Ser Xaa Cys His Phe Gly
 65 70 75 80
 Gln Pro Ser Pro Leu Ala Ser Lys Leu Lys Gln Pro Gln Phe Thr Phe
 85 90 95
 Ser Phe Thr Val Cys Leu Ala Cys Asn Arg Cys Ala Leu Ala Thr Gly
 100 105 110
 His Leu His Phe Xaa Ile Arg Val Ala Leu Pro Pro Ala Tyr Asn Xaa
 115 120 125
 Trp Ala Lys Asn His Gly Pro Xaa Ala Thr Ile Phe Ile Ala Ser Ala
 130 135 140
 Ala Ile Leu Cys Val Leu Cys Leu Arg Val Ala Val Gly Pro Pro Gln
 145 150 155 160
 Pro Ser Gln Asx Leu Asx Phe Xaa Thr Asn Ser Ile Xaa Leu Xaa Xaa
 165 170 175

Ser Asn Thr Leu Ser Pro Gly Ser Phe Val Glu Leu Cys Asn Val Ser
 180 185 190

Leu Leu Ser Ala Val Cys Phe Val Phe Ser Xaa Met Gly Lys Asx Leu
 195 200 205

Pro Ala Asn Tyr Asn Glu Ala Lys Cys Val Thr Phe Ser Leu Met Val
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Asn Xaa Ile Ser Trp Ile Ser Phe Phe Thr Val Tyr
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